

12. Item		13a. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted). Provide separate attachments if necessary.	16. Status
1	Inorganics - Page 36 is missing (part of the validation checklist).			<i>[Signature]</i>	✓
2	Radiochemistry - pg 14, It appears that the wrong Pu result was flagged. Pu 238 is supposed to be flagged. The validator has flagged the Pu 239/240.			<i>[Signature]</i>	✓
3	Semivolatiles - pg 3, States "Due to LCS recovery outside QC limits (62.6%), all results were qualified as estimates and flagged "J"." This should be all phenol results.			<i>[Signature]</i>	✓
4	Semivolatiles - Page 43 is missing (may only be a title page).			<i>[Signature]</i>	✓
5	Wet Chemistry - pg 36, checklist item 6 comment says "pH <2X J all" should say "pH >2X J all"			<i>[Signature]</i>	✓
	PCBs, Volatiles - No Comment				

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Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: PCB - Data Package No.WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	PCBs by 8082
B1C771	4/28/05	Soil	C	PCBs by 8082
B1C774	4/28/05	Soil	C	PCBs by 8082
B1C775	4/28/05	Soil	C	PCBs by 8082
B1C776	4/28/05	Soil	C	PCBs by 8082
B1C777	4/28/05	Soil	C	PCBs by 8082

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested by Client

DATA QUALITY OBJECTIVES

- **Holding Times/Sample Preservation**

Sample data were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be extracted within 14 days of sample collection and analyzed within 40 days of extraction.

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If holding times are exceeded by less than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detected sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

- **Method Blank**

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation or analysis. At least one method blank analysis must be conducted for every 20 samples. Method blanks should not contain target compounds at a concentration greater than minimum detectable activity (MDA). If target compounds are present, sample results less than five times the blank concentration are qualified as undetected and flagged "U". If the sample result is less than five times the blank concentration and less than MDA, the result is qualified as undetected and elevated to the MDA.

All method blank target compound results were acceptable.

Field Blanks

No equipment blanks were submitted for analysis.

- **Accuracy**

Matrix Spike/Blank Spike

Matrix spike and blank spike analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations and is done in duplicate. Matrix spike and blank spike analyses must be within control limits of 50% to 150%. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Non-detected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

All matrix spike/blank spike results were acceptable.

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Surrogate Recovery

The analysis of surrogate compounds provides a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the laboratory. When a surrogate compound recovery is outside the control window, all positively identified target compounds associated with the unacceptable surrogate recoveries are qualified as estimates and flagged "J". Non-detected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Non-detected compounds with surrogate recoveries above the upper control limit require no qualification.

All surrogate results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed as the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. For soil samples, results must be within RPD limits of plus/minus 35%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All precision results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQL) to ensure that laboratory detection levels meet the required criteria. All results exceeded the analyte specific RTQL. Under the FHI statement of work, no qualification is required.

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- **Completeness**

Data Package No. 50940 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

All results exceeded the analyte specific RTQL. Under the FHI statement of work, no qualification is required.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

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Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.
- NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).
- N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

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Appendix 2

Summary of Data Qualification

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PCB DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE <u>1</u> OF <u>1</u>
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

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Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000009

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case:		SDG: WSCF20050940											
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Analysis Date		5/13/05		5/13/05		5/13/05		5/13/05		5/13/05		5/13/05	
PCB	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Aroclor-1016	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1221	16.5	<110	U	<110	U	<100	U	<100	U	<100	U	<100	U
Aroclor-1232	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1242	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1248	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1254	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1260	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1262	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1268	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U

000010

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation. NA - Not analyzed

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
Organic														
W050001286	B1C769	GRP	TRENT	TPHOASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-448	U	<	250	ug/kg	1.00	2.5e+02	05/11/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	<	64.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	110	ug/kg	1.00	1.1e+02	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	12672-28-6	Aroclor-1248	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11098-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	108-48-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	290	ug/kg	1.00	2.9e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	200	ug/kg	1.00	2.0e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	121-14-8	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	120	ug/kg	1.00	1.2e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	100	ug/kg	1.00	1.0e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	821-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	87-88-5	Pentachlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	75-35-4	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	79-01-6	Trichloroethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015; F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C789	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	71-38-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001286	B1C789	158-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	158-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001286	B1C789	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	TPHGAASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-442	U	< 260	ug/kg	1.00	2.6e+02	05/11/05	04/28/05	04/28/05
W050001287	B1C771	12874-11-2	Aroclor-1018	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/06	04/28/05	04/28/05
W050001287	B1C771	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001287	B1C771	11141-18-6	Aroclor-1232	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	12872-29-8	Aroclor-1248	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/06	04/28/05	04/28/05
W050001287	B1C771	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	11098-82-6	Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	37324-23-5	Aroclor-1282	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	11100-14-4	Aroclor-1288	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	106-92-7	4-Nitrophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	129-00-0	Pyrene	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	87-88-5	Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 1.1

Groundwater Remediation Program

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jcr 6/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention:
Project:

Steve Trent
F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
W050001287	B1C771	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-38-3	1-Butanol	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	156-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH U	< 4.10e+03	ug/kg	1.00	4.1e+03	06/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHGAZOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 250	ug/kg	1.00	2.8e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	12874-11-2	Aroclor-1018	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	12872-28-6	Aroclor-1248	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11088-82-5	Aroclor-1280	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456 U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456 U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456 U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05

000013

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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jr 6/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP TRENT	87-86-3	Chloroform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	74-83-9	Bromomethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	74-87-3	Chloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	75-00-3	Chloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	71-36-3	1-Butanol	SOIL	LA-523-455 U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	156-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	156-58-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	TPHGAOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

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RQ = Result Qualifier

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U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	108-96-2	Phenol	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	68-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 97.0	ug/kg	1.00	97	05/10/05	04/28/05	04/28/05
W050001289	B1C775	621-84-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	83-32-8	Acetophenone	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	75-35-4	1,1-Dichloroethane	SOIL	LA-523-456	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	79-01-8	Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

000015

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MDL = Minimum Detection Limit
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Report WGPP/ver. 1.1
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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C776	GRP TRENT	127-18-4	Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	1330-20-7	Xylenea (total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	591-78-8	2-Hexanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	67-64-1	Acetone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	67-66-3	Chloroform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	71-55-8	1,1,1-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	74-83-9	Bromomethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	74-87-3	Chloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	75-00-3	Chloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C776	GRP TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	78-83-3	2-Butanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	71-36-3	1-Butanol	SOIL	LA-523-455 U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	166-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	158-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	TPHGAASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 280	ug/kg	1.00	2.8e+02	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	12874-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention:
Project:

Steve Trent
F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	11141-16-6	Aroclor-1232	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	12872-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	06/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	37324-23-6	Aroclor-1262	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	100-09-7	4-Nitrophenol	SOIL	LA-523-456 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	108-48-7	1,4-Dichlorobenzene	SOIL	LA-523-456 U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	108-95-2	Phenol	SOIL	LA-523-456 U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456 U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456 U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	129-00-8	Pyrene	SOIL	LA-523-456 U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456 U	< 96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	621-64-7	N-Nitrosodi-n-propylamine	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456 U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	95-67-8	2-Chlorophenol	SOIL	LA-523-456 U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	79-01-6	Trichloroethene	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	71-43-2	Benzene	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	108-88-3	Toluene	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	76-34-3	1,1-Dichloroethane	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-456 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	156-60-5	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	106-62-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	108-95-2	Phenol	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	129-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001291	B1C777	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	75-36-4	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Sample Delivery Group	WSCF20050940
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F04-015
Data Deliverable	Summary Report

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.
- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.
- Sulfate - The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals - The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids - Analyzed for organic results correction.

pH - All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Uranium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Concentration	Count
<u>Uranium-234/ Uranium-235</u>				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
<u>Plutonium-238</u>				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Result	Notes
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americium-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Sample ID	Isotope	Percent Recovery (%)
<u>Americium-243</u>			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
<u>Plutonium-242</u>			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
			Percent Recovery (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
<u>Strontium-85</u>			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
<u>Uranium-232</u>			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample ID	Lab Sample	Tracer	Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

Hg - mercury
 IC - ion chromatography
 ICP - inductively coupled plasma
 ICP/AES - ICP/atomic emission spectroscopy
 ICP/MS - ICP/mass spectrometry
 Total U - total uranium
 AT/TB - total alpha/total beta
 AEA - Alpha Energy Analysis
 WTPH-G - Total Hydrocarbons-Gasoline

Am - americium
 Cm - curium
 Pu - plutonium
 Np - neptunium
 GEA - gamma energy analysis
 H3 - Tritium
 Sr - Strontium 89, 90
 WTPH-D - Total Hydrocarbons-Diesel
 TSS - Total Suspended Solids

5/31/05

Fiber Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 2	
COLLECTOR	Poppe/Pluse/Tyrn/Mberg	COMPANY CONTACT	CS Clearback	TELEPHONE NO.	372-9638	PROJECT COORDINATOR	TRENT, SJ
SAMPLING LOCATION	216-T-13; 10-11 R	PROJECT DESIGNATION	200-MW-1 Characterization Sampling and Analysis - Soil		FIELD LOGBOOK NO.	COA	11914-MS10
ICE CHEST NO.		OFFSITE PROPERTY NO.	N/A		METHOD OF SHIPMENT	Government Vehicle	
SHIPPED TO	Waste Sampling & Characterization	BELL OF LADING/AIR BILL NO.	N/A				
MATRIX*		PRESERVATION	Coat 4C	Coat 4C	Coat 4C	Coat 4C	None
A-Asx		TYPE OF CONTAINER	3G	3G	3G	3G	P
B-Uruid		NO. OF CONTAINER(S)	1	1	1	1	1
C-Carbon		VOLUME	250mL	250mL	40mL	120mL	500mL
D-Solid		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
E-Liquid		SPECIAL HANDLING AND/OR STORAGE	Radioactive To: BUC770				
F-D-01		SAMPLE NO.	20050940				
G-Sediment		SAMPLE DATE	4/20/05 0930				
H-Tissue		MATRIX*	BIC769 100500-1236 SOIL				
I-Respiration		CHAIN OF POSSESSION	SIGN/PRINT NAMES				
J-Respirator		RELINQUISHED BY/REMOVED FROM	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
K-Membrane		RELINQUISHED BY/REMOVED FROM	4-28-05 14:45	4-28-05 14:45	4-28-05 14:45	4-28-05 14:45	4-28-05 14:45
L-Membrane		RELINQUISHED BY/REMOVED FROM					
M-Other		RELINQUISHED BY/REMOVED FROM					
		RELINQUISHED BY/REMOVED FROM					
		RELINQUISHED BY/REMOVED FROM					
		RELINQUISHED BY/REMOVED FROM					
		RELINQUISHED BY/REMOVED FROM					
		RELINQUISHED BY/REMOVED FROM					
LABORATORY SECTION		RECEIVED BY	TITLE				
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD	DISPOSED BY				
			DATE/TIME				

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

Fuser Hamford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FO4-015-124	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	BN
Pope/Pister/Tyrol/Wiberg	CS Caribook	372-9638	TRENT, SJ	AIR QUALITY	<input type="checkbox"/>
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.		DATA
216-T-13; 10-11 N	200-MW-1 Characterization Sampling and Analysis - Soil		FO4-015		TURNAROUND
ICE CHEST NO.	FIELD LOGBOOK NO.	CDA	METHOD OF SHIPMENT		45 Days
		119146ES10	Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
<p>SPECIAL INSTRUCTIONS</p> <p>** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.</p> <p>(1)IC Anions - 200.0 (Phosphate-Nitrogen-Nitrate-Nitrite-Nitrogen in phosphate, Sulfate-Nitrate-Nitrite-Nitrogen in phosphate, pH (SO4) - 9045;</p> <p>(2)IC/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver, Sulfate) (CPMS - 200.8 (Add-on) (Lead, Uranium);</p> <p>(3)VDA - 8260A (ICL); VDA - 8260A (Add-On) (1: Butanol, di-1,2-Dichloroethylene, n-Butylacetone (MS-1, 2-Dichloroethylene);</p> <p>(4)Sem-VDA - 8270A (Add-On) (Total phosgene); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)</p> <p>(5)Gamma Spectroscopy (Caesium-137, Cobalt-60, Europium-152, Europium-155) Isotope Fluorine, Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;</p>					

PM6 2/14/08

A-600-64 (03/03)

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-125	PAGE 1 OF 2		
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE BN	DATA TURNAROUND 45 Days / 45 Days <i>1/2</i>		
SAMPLING LOCATION 216-T-13; 10-11 R		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144E510		METHOD OF SHIPMENT Government Vehicle					
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A					
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None		
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P		
		NO. OF CONTAINER(S)		1	1	1	3	1	1		
		VOLUME		250mL	120mL	250mL	40mL	120mL	500mL		
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCB - 8062	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1C771	SOIL	4/28/15	0930								
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS							
<i>JS/MP/TSW</i>	4-28-15	<i>KA FRAZIER</i>	4/28/15 14:45								
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME								
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME								
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME								
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME								
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME								
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME								
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME					

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Flour Handled Line		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RM-01B-12S	PAGE 2 OF 2
COLLECTOR Pepe/Heber/Tyre/Wiberg	COMPANY CONTACT CS Oakhock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13, 10-11 R	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - SOL	FIELD LOGBOOK NO. COA 119144ES10	SAF NO. RM-01B	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.			METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
<p>SPECIAL INSTRUCTIONS</p> <p>as The laboratory is to report both benzene and diesel range compounds from the WTRHD analysis</p> <p>(1) JIC Aroclors - 300.0 (benzofluoranthene, fluorene, benzofluoranthene, triphenylene in phosphate, sulfate) Total Sulfur - 9000; pH (Soil) - 9015; (2) JIC/MS - 200.8 (TAL) (Cadmium, Chromium, copper, silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3) VOA - 8250A (CEC); VOA - 8260A (Add-On) (1-Stanol, ds-1,2-Dichloroethylene, ethylbenzene, Toluene, 1,2-Dichloroethylene) (4) Semi-VOA - 8270A (Add-On) (Total phosphorus) TPH-Gasoline Range - WTRH-G; TPH-Diesel Range - WTRH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5) Semina Spectroscopy (Oeslin-137, Cobalt-50, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr.</p> <p style="text-align: right;">PMG 2/14/05</p>					

4-6003-31.8(04/03)

FLUOR HANFORD INC. F-117-13-12-13 R ICE CHEST NO.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST COMPANY CONTACT: CS Carlock TELEPHONE NO.: 372-9638 PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil FIELD LOGBOOK NO.: COA 11914-ES10		PRICE CODE: 81N AIR QUALITY: <input type="checkbox"/>	PAGE 1 OF 2 DATA TURNOVER: 45 Days / 45 Days
SHIPPED TO Waste Sampling & Characterization		PROJECT COORDINATOR: TRENT, SJ S/NP NO.: F04-015 METHOD OF SHIPMENT: Government Vehicle		BILL OF LADING/AIR BILL NO.: N/A	
MATRIX* A-Air OL-Oil LI-Liquid DS-Drum S-Solid L-Liquid O-Oil S-Soil SS-Sediment T-Tissue V-Vegetation W-Water WI-Wipe X-Other	PRESERVATION: None TYPE OF CONTAINER: 3 NO. OF CONTAINER(S): 1 VOLUME: 250ml	Cool 4C: 40ml Cool 4C: 250ml Cool 4C: 120ml Cool 4C: 40ml	Cool 4C: 40ml Cool 4C: 250ml Cool 4C: 120ml Cool 4C: 40ml	Cool 4C: 40ml Cool 4C: 250ml Cool 4C: 120ml Cool 4C: 40ml	None P 1 500ml
SPECIAL HANDLING AND/OR STORAGE Radioactive Tr To: B1C780		SAMPLE ANALYSIS: SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS SEE ITEM (3) IN SPECIAL INSTRUCTIONS SEE ITEM (4) IN SPECIAL INSTRUCTIONS SEE ITEM (5) IN SPECIAL INSTRUCTIONS		SEE ITEM (6) IN SPECIAL INSTRUCTIONS SEE ITEM (7) IN SPECIAL INSTRUCTIONS SEE ITEM (8) IN SPECIAL INSTRUCTIONS SEE ITEM (9) IN SPECIAL INSTRUCTIONS	
SAMPLE NO. B1C774	MATRIX* SOIL	SAMPLE DATE 4-24-85	SAMPLE TIME 0955	SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
CHAIN OF POSSESSION					
RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85
RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85
RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85
RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85
RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RELINQUISHED BY/REMOVED FROM: [Signature] DATE/TIME: 4-23-85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85	RECEIVED BY/STORER IN: [Signature] DATE/TIME: 4/23/85
LABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD	DISPOSED BY	TITLE	DATE/TIME

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FM4-015-137	PAGE 2 OF 2
COLLECTOR Pope/Plister/Tyra/Wiberg	COMPANY CONTACT CS Ceatlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. FM4-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.

(1)IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 9044; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, Toluene, 1,2-Dichloroethylene)

(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)

(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						FO4-015-138		PAGE 1 OF 2		
COLLECTOR Pope/Plister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE BN		DATA TURNAROUND 45 Days / 45 DAYS <i>18</i>		
SAMPLING LOCATION 216-T-13; 14-15 ft		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. FO4-015		AIR QUALITY <input type="checkbox"/>				
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle						
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A						
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P			
		NO. OF CONTAINER(S)		1	1	1	3	1	1			
		VOLUME		250mL	120mL	250mL	40mL	120mL	900mL			
		SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C781		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCIs - 802	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1C775	SOIL	4-28-65	1015	X	X	X	X	X	X			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS								
<i>Johny Pope</i>	4-28-65 1445	<i>Vito Simas</i>	4/28/65 1445									
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME									
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME									
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME									
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME									
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME									
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME						
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME						

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A-6003-618(03/03)

Fiber Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-138	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Poppe/Pfeifer/Tyrie/Wiberg	CS Coxtack	372-9638	TRENT, SJ	8N	45 Days
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	<input type="checkbox"/>
216-T-13; 14-15 R	200-MH-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT		
		11914RES10	Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
<p>SPECIAL INSTRUCTIONS</p> <p>*** The laboratory is to report both ketone and diesel range compounds from the WTRH-D analysis.</p> <p>(1) IC Arbons - 300.0 (Phenols, Hexanes, Heptanes, Octanes, Nonanes, Decanes, Undecanes, Dodecane, Tridecane, Tetradecane, Pentadecane, Hexadecane, Heptadecane, Octadecane, Nonadecane, Eicosane, Heneicosane, Docosane, Tricosane, Tetracosane, Pentacosane, Hexacosane, Heptacosane, Octacosane, Nonacosane,triacontane, Heteroatom-containing compounds, Phosphorus in phosphate, Sulfur in organo-sulfur, PI (Soil) - 9045;</p> <p>(2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Cobalt, Copper, Fluorine, ICP/MS - 200.8 (Add-on) (Lead, Uranium)</p> <p>(3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, di-1,2-Dichloroethylene, n-Butylamine, Triethylamine, Triethylamine, 1,2-Dichloroethylene)</p> <p>(4) Semi-VOA -- 8270A (Add-On) (Methyl phosphine) TPH-Gasoline Range - WTRH-G; TPH-Diesel Range - WTRH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)</p> <p>(5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;</p> <p style="text-align: right;">PMG 2/14/05</p>					

A-6003-61(03/03)

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-138	PAGE 1 OF 2
COLLECTOR Pope/Plister/Tyra/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 1191448510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. *PMG 2/14/05*

(1) IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 3010; pH (Soil) - 9045;

(2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)

(3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, TERS-1,2-Dichloroethylene);

(4) Semi-VOA - 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)

(5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;

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COLLECTOR		CHART OF CUSTODY/SAMPLE ANALYSIS REQUEST		PG#-015-140	PAGE 1 OF 2
Flyer Hamford Inc.		COMPANY CONTACT	TELEPHONE NO.	PRICE CODE	DATA TURNDOWN
Pope/Pfeifer/Tyler/Wiberg		CS Centock	372-9638	BN	45 Days
SAMPLING LOCATION		PROJECT DESIGNATION	PROJECT COORDINATOR	AIR QUALITY	
216-T-13; 24-25 R		200-ANN-1 Characterization Sampling and Analysis - Soil	TRENT, NJ	<input type="checkbox"/>	
ICE CRIST NO.		FIELD LOGBOOK NO.	SAF NO.		
		COA	PH-015		
SHIPPED TO		OFFSITE PROPERTY NO.	METHOD OF SHIPMENT		
Waste Sampling & Characterization		N/A	Government Vehicle		
SPECIAL INSTRUCTIONS		BILL OF LADING/AIR BILL NO.			
<p>** The laboratory is to report both hexene and diesel range compounds from the WPH-D analysis.</p> <p>(1)IC Aqueous - 200.0 (Residue, nitrogen in nitrate, phosphorus in phosphate, sulfate) Fuel-Spender-9829; pH (Soil) - 9045;</p> <p>(2)IC/MS - 200.0 (TAL) (Cadmium, Chromium, Copper, Silver) CPVNS - 200.0 (Add-on) (Lead, Uranium)</p> <p>(3)VOC - 8250A (TCL); VOC - 8160A (Add-On) (1,1,1-trichloroethane, 1,1,2-dichloroethane, 1,1,2,2-tetrachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane)</p> <p>(4)Semi-VOC - 8270A (Add-On) (Toluene) phenol(s)</p> <p>(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Abundance (Isotopic Uncertainty)</p>		N/A			

4-600-618(2/10)

Appendix 5

Data Validation Supporting Documentation

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PCB DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	200-mw-1		DATA PACKAGE: S0940		
VALIDATOR:	TLD	LAB:	WSCF	DATE: 6/18/05	
			SDG:	S0940	
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082	SW-846 8081 (TCLP)		
SAMPLES/MATRIX					
BIC769		BIC771	BIC774	BIC775	
BIC776		BIC777			
soil					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes No **N/A**

Comments: _____

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations acceptable? Yes No **N/A**
 Continuing calibrations acceptable? Yes No **N/A**
 Standards traceable? Yes No **N/A**
 Standards expired? Yes No **N/A**
 Calculation check acceptable? Yes No **N/A**
 DDT and endrin breakdowns acceptable? Yes No **N/A**

Comments: _____

PCB DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) Yes No N/A
Calibration blank results acceptable? (Levels D, E) Yes No N/A
Laboratory blanks analyzed? Yes No N/A
Laboratory blank results acceptable? Yes No N/A
Field/trip blanks analyzed? (Levels C, D, E) Yes No N/A
Field/trip blank results acceptable? (Levels C, D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A
Comments: NO PK

4. ACCURACY (Levels C, D, and E)

Surrogates analyzed? Yes No N/A
Surrogate recoveries acceptable? Yes No N/A
Surrogates traceable? (Levels D, E) Yes No N/A
Surrogates expired? (Levels D, E) Yes No N/A
MS/MSD samples analyzed? Yes No N/A
MS/MSD results acceptable? Yes No N/A
MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
MS/MSD standards expired? (Levels D, E) Yes No N/A
LCS/BSS samples analyzed? Yes No N/A
LCS/BSS results acceptable? Yes No N/A
Standards traceable? (Levels D, E) Yes No N/A
Standards expired? (Levels D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A
Performance audit sample(s) analyzed? Yes No N/A
Performance audit sample results acceptable? Yes No N/A
Comments: NO PK

PCB DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

- Duplicate RPD values acceptable? Yes No N/A
- Duplicate results acceptable? Yes No N/A
- MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
- MS/MSD standards expired? (Levels D, E) Yes No N/A
- Field duplicate RPD values acceptable? Yes No N/A
- Field split RPD values acceptable? Yes No N/A
- Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: _____

6. SYSTEM PERFORMANCE (Levels D and E)

- Chromatographic performance acceptable? Yes No N/A
- Positive results resolved acceptably? Yes No N/A

Comments: _____

7. HOLDING TIMES (all levels)

- Samples properly preserved? Yes No N/A
- Sample holding times acceptable? Yes No N/A

Comments: _____

PCB DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Compound identification acceptable? (Levels D, E) Yes No N/A
Compound quantitation acceptable? (Levels D, E) Yes No N/A
Results reported for all requested analyses? Yes No N/A
Results supported in the raw data? (Levels D, E) Yes No N/A
Samples properly prepared? (Levels D, E) Yes No N/A
Detection limits meet RDL? Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A
Comments: all over

9. SAMPLE CLEANUP (Levels D and E)

Fluoricil ® (or other absorbent) cleanup performed? Yes No N/A
Lot check performed? Yes No N/A
Check recoveries acceptable? Yes No N/A
GPC cleanup performed? Yes No N/A
GPC check performed? Yes No N/A
GPC check recoveries acceptable? Yes No N/A
GPC calibration performed? Yes No N/A
GPC calibration check performed? Yes No N/A
GPC calibration check retention times acceptable? Yes No N/A
Check/calibration materials traceable? Yes No N/A
Check/calibration materials Expired? Yes No N/A
Analytical batch QC given similar cleanup? Yes No N/A
Transcription/Calculation Errors? Yes No N/A
Comments: _____

Appendix 6

Additional Documentation Requested by Client

000044

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: PCBs complete list

SAF Number: F04-015
 Sample Date: 04/27/05
 Receive Date: 04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Aroclor-1280	11096-82-5	1045.1	111.000	% Recov	05/13/05	75.000	125.000	
MS	Decachlorobiphenyl	2051-24-3	960.09	102.000	% Recov	05/13/05	50.000	150.000	
MS	Tetrachloro-m-xylene	877-09-8	888.18	94.200	% Recov	05/13/05	50.000	150.000	
MSD	Aroclor-1280	11096-82-5	1075.7	111.000	% Recov	05/13/05	75.000	125.000	
MSD	Decachlorobiphenyl	2051-24-3	972.47	101.000	% Recov	05/13/05	50.000	150.000	
MSD	Tetrachloro-m-xylene	877-09-8	943.22	97.700	% Recov	05/13/05	50.000	150.000	
SPK-RPD	Aroclor-1280	11096-82-5	111.000	0.000	RPD	05/23/05	0.000	25.000	
SPK-RPD	Decachlorobiphenyl	2051-24-3	101.000	0.985	RPD	05/23/05	0.000	20.000	
SPK-RPD	Tetrachloro-m-xylene	877-09-8	97.700	3.848	RPD	06/23/06	0.000	20.000	
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1148.9	108.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1079.6	99.400	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001287									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1118.7	102.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1042.4	95.300	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1050.9	100.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	993.25	94.800	% Recov	05/13/05	50.000	150.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: PCBs complete list

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001289									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1056.9	104.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	952.31	93.800	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1050.1	102.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1061.2	102.000	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1073.5	105.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	973.05	95.300	% Recov	05/13/05	50.000	150.000	
BATCH QC									
BLANK	Aroclor-1016	12674-11-2	< 50	n/a	UGKG	05/13/05			U
BLANK	Aroclor-1221	11104-28-2	< 100	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1232	11141-18-5	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1242	53469-21-9	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1248	12672-29-6	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1254	11097-89-1	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1260	11086-82-5	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1262	37324-23-5	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1268	11100-14-4	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Decachlorobiphenyl	2051-24-3	1041.0	104.000	% Recov	05/13/05	50.000	150.000	
BLANK	Tetrachloro-m-xylene	877-09-8	949.26	94.800	% Recov	05/13/05	50.000	150.000	
LCS	Aroclor-1260	11086-82-5	1117.1	112.000	% Recov	05/13/05	70.000	130.000	
LCS	Decachlorobiphenyl	2051-24-3	1025.2	103.000	% Recov	05/13/05	50.000	150.000	

0000046

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: PCBs complete list

SAF Number: F04-015
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Tetrachloro-m-xylene	877-08-8	919.52	92.000	% Recov	05/13/05	50.000	150.000	

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Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Inorganics - Data Package No. WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C771	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C774	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C775	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C776	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C777	4/28/05	Soil	C	ICP/MS metals by 200.8

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested by Client

DATA QUALITY PARAMETERS

- **Holding Times**

Analytical holding times for metals are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be analyzed within 6 months for ICP metals and 28 days for mercury.

000001



All holding times were acceptable.

- **Preparation (Method) Blanks**

Preparation Blanks

At least one preparation blank, consisting of deionized distilled water processed through each sample preparation and analysis procedure, must be prepared and analyzed with every sample delivery group. In the case of positive blank results, samples with digestate concentrations less than five times the preparation blank value have had their associated values qualified as non-detected and flagged "U". Samples with concentrations of greater than five times the highest blank concentration do not require qualification.

In the case of negative blank results, if the absolute value exceeds the contract required detection limit (CRDL), all nondetects are rejected and flagged "UR" and all detects that are less than ten times the absolute value of the associated preparation blank result are qualified as estimates and flagged "J". If the absolute value of the negative preparation blank is greater than the instrument detection limit (IDL) and less than or equal to the CRDL, all nondetects are qualified as estimates and flagged "UJ" and all detects less than ten times the absolute value of the blank are qualified as estimates and flagged "J". If the sample results are greater than ten times the absolute value of the preparation blank, no qualification is necessary.

All preparation blank results were acceptable.

Field (Equipment) Blank

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike & Matrix Spike Duplicate

Matrix spike (MS), matrix spike duplicate (MSD) and laboratory control sample (LCS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess effect of the matrix on the ability to accurately quantify sample concentrations. Recoveries must fall within the range of 75% to 125%. Samples with a spike recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a spike recovery of 30% to 74% and a sample result less than the IDL are qualified "UJ". Samples with a spike recovery of greater than 125% or less than 74% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a spike recovery greater than 125% and a sample result less than the IDL, no qualification is required.

000002

All MS/MSD results were acceptable.

Laboratory Control Sample

The LCS is used to monitor the overall performance of all steps in the analysis. Recoveries must fall within the range of 80% to 120% for LCS analysis. Samples with a recovery of less than 50% are rejected and flagged "UR". Samples with a recovery of 50% to 79% and a sample recovery below the IDL are qualified "UJ". Samples with a recovery of greater than 120% or less than 80% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 120% and a sample result less than the IDL, no qualification is required.

All LCS results were acceptable.

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike and matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than +/- 35%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All laboratory duplicate results were acceptable.

Field Duplicate

No field duplicates were submitted for analysis.

- **Analytical Detection Limits**

Reported analytical detection levels are compared against the required target quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. The chromium result in sample B1C777 was reported above the RTQL. Under the FHI statement of work, no qualification is required. All other results met the analyte specific RTQL.

000003

- **Completeness**

Data package No. 50940 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

The chromium result in sample B1C777 was reported above the RTQL. Under the FHI statement of work, no qualification is required.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

000005

Qualifiers which may be applied by data validators in compliance with FHI validation SOW are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.
- BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.
- NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).
- N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

000006

Appendix 2

Summary of Data Qualification

000007

INORGANIC DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE <u>1</u> OF <u>1</u>
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

000008

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000009

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case		SDG: WSCF20050940											
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Inorganics	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Cadmium	0.5	0.159		0.246		0.306		0.167		0.141		<0.0993	U
Chromium	1	7.26		6.07		6.92		6.45		4.22		<3.97	U
Lead	10	10.9		8.18		13.4		7.45		3.02		3.11	
Uranium	1	0.901		1.03		1.01		0.928		0.544		0.459	

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REVISED
 3/1/05

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
Inorganic														
W050001288	B1C769	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	91.2	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	9.52	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	12.0	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.159	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	7.26	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412	10.9	mg/kg	0.93	0.19	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.901	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	90.7	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	9.57	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	2.65	mg/kg	49.00	2.6	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	4.90	mg/kg	49.00	4.9	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.246	mg/kg	0.95	0.095	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.07	mg/kg	0.95	3.8	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412	8.18	mg/kg	0.95	0.19	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	1.03	mg/kg	0.95	0.095	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	94.4	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	9.58	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	16.7	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.308	mg/kg	0.91	0.091	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.92	mg/kg	0.91	3.6	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412	13.4	mg/kg	0.91	0.18	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	1.01	mg/kg	0.91	0.091	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	98.2	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	9.70	pH	1.00	0.010	05/03/05	04/28/05	04/28/05

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MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 1.1
Groundwater Remediation Program

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JTC 6/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C776	GRP TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410 U	< 2.65	mg/kg	49.00	2.6	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410 B	18.5	mg/kg	49.00	4.8	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.167	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.45	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	7.46	mg/kg	0.93	0.19	05/10/05	04/28/05	04/28/05
W050001289	B1C776	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.928	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	TS	Total Solids	SOIL	LA-510-412	97.0	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	PH	pH Measurement	SOIL	LA-212-411	9.89	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410 U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410 B	7.32	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.141	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	4.22	mg/kg	0.89	3.6	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	3.02	mg/kg	0.89	0.18	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.544	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	TS	Total Solids	SOIL	LA-510-412	98.0	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	PH	pH Measurement	SOIL	LA-212-411	8.44	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410 U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410 B	35.0	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412 U	< 0.0993	mg/kg	0.99	0.089	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412 U	< 3.97	mg/kg	0.99	4.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	3.11	mg/kg	0.99	0.20	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.459	mg/kg	0.99	0.089	05/10/05	04/28/05	04/28/05

0000012

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 1.1

Groundwater Remediation Program

Handwritten signature and date: Jc 6/20/05

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

000013

Sample Delivery Group	WSCF20050940
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F04-015
Data Deliverable	Summary Report

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.
- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.
- Sulfate - The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals - The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids - Analyzed for organic results correction.

pH - All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Uranium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Activity	Count Rate
<u>Uranium-234/ Uranium-235</u>				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
<u>Plutonium-238</u>				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Results	QC
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americium-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Sample ID	Tracer Isotope	Recovery (%)
<u>Americium-243</u>			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
<u>Plutonium-242</u>			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
			Percent
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
<u>Strontium-85</u>			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
<u>Uranium-232</u>			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	Tracer	Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

Hg - mercury
 IC - ion chromatography
 ICP - inductively coupled plasma
 ICP/AES - ICP/atomic emission spectroscopy
 ICP/MS - ICP/mass spectrometry
 Total U - total uranium
 AT/TB - total alpha/total beta
 AEA - Alpha Energy Analysis
 WTPH-G - Total Hydrocarbons-Gasoline

Am - americium
 Cm - curium
 Pu - plutonium
 Np - neptunium
 GEA - gamma energy analysis
 H3 - Tritium
 Sr - Strontium 89, 90
 WTPH-D - Total Hydrocarbons-Diesel
 TSS - Total Suspended Solids

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyrr/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 10-11 R	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. <i>PM6 2/14/05</i> (1) IC Anions - 300.0 (Phosphate, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate), Total Cyanide - 9049; pH (Soil) - 9045; (2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene) (4) Semi-VOA - 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					F04-015-125	PAGE 1 OF 2									
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N	DATA TURNAROUND								
SAMPLING LOCATION 216-T-13; 10-11 R		PROJECT DESIGNATION 200-NW-1 Characterization Sampling and Analysis - Soil			SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>	45 Days / 45 Days <i>1/2</i>									
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle											
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A												
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Trace V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None							
			TYPE OF CONTAINER		#G	#G	#G	#G	#G	P							
			NO. OF CONTAINER(S)		1	1	1	3	1	1							
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL							
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	FCM - 8002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS							
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME														
B1C771	SOIL	4/28/85	0930														
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS									
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS									
<i>ISSA...</i>		<i>4-28-85</i>		<i>TA FRAZIER</i>		<i>4/28/85 14:45</i>											
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME											
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME											
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME											
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME											
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME											
LABORATORY SECTION	RECEIVED BY			TITLE			DATE/TIME										
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DISPOSED BY			DATE/TIME										

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Ceerlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	CDA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis *PMG 2/14/05*

(1)IC Anions - 300.D (Fluoride, Nitrate, Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045;
(2)ICP/MS - 200.B (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.B (Add-on) (Lead, Uranium)
(3)VQA - 8260A (TCL); VQA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, Trans-1,2-Dichloroethylene)
(4)Semi-VQA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

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Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					F04-015-137	PAGE 1 OF 2										
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE BN	DATA TURNAROUND 45 Days / 45 Days									
SAMPLING LOCATION 216-T-13; 12-13 ft		PROJECT DESIGNATION 200-NW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>										
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle												
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A												
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None								
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P								
			NO. OF CONTAINER(S)		1	1	1	3	1	1								
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL								
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C780		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCN - 8002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS								
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME															
B1C774	SOIL	4-27-05	0955	X	X	X	X	X	X									
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS										
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS										
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME												
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME												
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME												

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Plister/Tyra/Wiberg	COMPANY CONTACT CS Ceatrock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. <i>PMG 2/14/05</i> (1) IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) (Total Cyanide - 9010; pH (Soil) - 9045; (2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene) (4) Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;					

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Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Plister/Tyra/Wberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 218-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. *PM6 2/14/05*

(1) IC Anions - 300.D (Fluoride, Nitrate, Nitrite, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate); Total Cyanide - 9010; pH (Soil) - 9045;
 (2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver); ICP/MS - 200.8 (Add-on) (Lead, Uranium)
 (3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Hexane, trans-1,2-Dichloroethylene)
 (4) Semi-VOA - 8270A (Add-On) (Tributyl phosphate); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
 (5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;

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Fleur Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-139	PAGE 1 OF 2	
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N	DATA TURNAROUND 45 Days / <i>45-DAYS 4.26.05</i>	
SAMPLING LOCATION 216-T-13; 19-20 ft		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144E510		METHOD OF SHIPMENT Government Vehicle				
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A				
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None
			TYPE OF CONTAINER		gG	gG	gG	gGs*	gG	P
			NO. OF CONTAINER(S)		1	1	1	3	1	2
			VOLUME		250ml	120ml	250ml	40ml	120ml	500ml
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C782		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCNs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B1C776	SOIL	4-28-05	1300	X	X	X	X	X	X	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
LABORATORY SECTION	RECEIVED BY		TITLE		DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY		DATE/TIME					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			FO4-015-139	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ		PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. FO4-015		AIR QUALITY <input type="checkbox"/>	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle			
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS						
<p>** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05</p> <p>(1) IC Anions - 300.0 (Fluoride, Nitrogen-In-Nitrate, Nitrogen-In-Nitrite, Phosphorous In phosphate, Sulfate) (Total Cyanide - 9040; pH (Soil) - 9045);</p> <p>(2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)</p> <p>(3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene)</p> <p>(4) Sem-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)</p> <p>(5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;</p>						

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-140	PAGE 1	OF 2												
COLLECTOR Pope/Pfister/Tyra/Wiberg SAMPLING LOCATION 216-T-13; 24-25 ft ICE CHEST NO.		COMPANY CONTACT CS Clearlock PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil FIELD LOGBOOK NO. COA 119144ES10		TELEPHONE NO. 372-9638 PROJECT COORDINATOR TRENT, SJ SAF NO. F04-015 METHOD OF SHIPMENT Government Vehicle		PRICE CODE SN AIR QUALITY <input type="checkbox"/>		DATA TURNAROUND 45 Days / 45 Days														
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A																		
MATRIX* A=Air DL=Drum Liquid DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sealment T=Trace V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None													
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P													
		NO. OF CONTAINER(S)		1	1	1	3	1	1													
		VOLUME		250mL	120mL	250mL	40mL	120mL	500mL													
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C783		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCW - 8042	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS													
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME																			
B1C777	SOIL	4.28.05	1330	+	+	+	+	+	+													
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS														
J. POPE		4-28-05 1445		Victor J. Sims		4/28/05 1445																
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME																
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME																
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME																
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME																
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME																
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME																
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME																

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Fines Hazard Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FOA-DIS-140	PAGE 2 OF 2
COLLECTOR Pope/Hear/Tym/Wberg	COMPANY CONTACT CS Ceatock	TELEPHONE NO. 372-9639	PROJECT COORDINATOR Trent, SJ	PRICE CODE BIN	DATA TURNAROUND 45 DAYS
SAMPLING LOCATION 216-T-13; 24-25 R	PROJECT DESIGNATION 200-HV-1 Characterization Sampling and Analysis - Sol	FIELD LOGBOOK NO. COA	SAF NO. FOA-015	AIR QUALITY <input type="checkbox"/>	
ICE CRIST NO.			METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	119144E510	BILL OF LADING/AIR BILL NO. N/A		
SPECIAL INSTRUCTIONS ** The laboratory is to report both benzene and diesel range compounds from the WPH-D method. (1)IC Anions - 300.0 (various, nitrogen to nitrate, nitrogen in nitrite, phosphorus in phosphate, sulfur) <i>Went-Gymler-9999; pH (507) - 9045;</i> (2)ICP/MS - 300.0 (TAL) (Cadmium, Chromium, Copper, Silver, Strontium - 280.0 (Add-on) (Lead, Uranium) (3)YGA - 6260A (TL); YGA - 0260A (Add-On) (1-iodoand, cis-1,2-dichloroethylene, n-tetradecane, trans-1,2-dichloroethylene) (4)SEM-VGA - 8270A (Add-On) (Thiophyl phosphate) TPH-Gasoline Range - WPH-G; TPH-Diesel Range - WPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-90,90 -- Total Sr;					

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Appendix 5

Data Validation Supporting Documentation

000033

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	200-MW-1		DATA PACKAGE: 50940		
VALIDATOR:	TLP	LAB:	WSCF	DATE: 6/18/05	
			SDG:	50940	
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg	SW-846 Cyanide	200.8	
SAMPLES/MATRIX					
BIC769		BIC771		BIC774 BIC775	
BIC776		BIC777			
304					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes No N/A

Comments: _____

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? Yes No N/A

Initial calibrations acceptable? Yes No N/A

ICP interference checks acceptable?..... Yes No N/A

ICV and CCV checks performed on all instruments?..... Yes No N/A

ICV and CCV checks acceptable?..... Yes No N/A

Standards traceable? Yes No N/A

Standards expired?..... Yes No N/A

Calculation check acceptable?..... Yes No N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E)..... Yes No N/A
ICB and CCB results acceptable? (Levels D, E) Yes No N/A
Laboratory blanks analyzed? Yes No N/A
Laboratory blank results acceptable?..... Yes No N/A
Field blanks analyzed? (Levels C, D, E) Yes No N/A
Field blank results acceptable? (Levels C, D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A
Comments: no FB

4. ACCURACY (Levels C, D, and E)

MS/MSD samples analyzed?..... Yes No N/A
MS/MSD results acceptable?..... Yes No N/A
MS/MSD standards NIST traceable? (Levels D, E)..... Yes No N/A
MS/MSD standards expired? (Levels D, E) ~~Yes~~ No N/A
LCS/BSS samples analyzed?..... ~~Yes~~ No N/A
LCS/BSS results acceptable?..... Yes No N/A
Standards traceable? (Levels D, E)..... Yes No N/A
Standards expired? (Levels D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A
Performance audit sample(s) analyzed? Yes No N/A
Performance audit sample results acceptable?..... Yes No N/A
Comments: no PMS

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Duplicate results acceptable?.....	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
MS/MSD standards NIST traceable? (Levels D, E)	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
MS/MSD standards expired? (Levels D, E)	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Field duplicate RPD values acceptable?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Field split RPD values acceptable?.....	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Transcription/calculation errors? (Levels D, E).....	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A

Comments: _____

6. ICP QUALITY CONTROL (Levels D and E)

ICP serial dilution samples analyzed?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
ICP serial dilution %D values acceptable?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
ICP post digestion spike required?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
ICP post digestion spike values acceptable?.....	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Standards traceable?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Standards expired?.....	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Transcription/calculation errors?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

7. FURNACE AA QUALITY CONTROL (Levels D and E)

Duplicate injections performed as required?	Yes	No	N/A
Duplicate injection %RSD values acceptable?	Yes	No	N/A
Analytical spikes performed as required?	Yes	No	N/A
Analytical spike recoveries acceptable?	Yes	No	N/A
Standards traceable?	Yes	No	N/A
Standards expired?	Yes	No	N/A
MSA performed as required?	Yes	No	N/A
MSA results acceptable?	Yes	No	N/A
Transcription/calculation errors?	Yes	No	N/A

Comments: _____

8. HOLDING TIMES (all levels)

Samples properly preserved?	Yes	No	N/A
Sample holding times acceptable?	Yes	No	N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

9. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? Yes No N/A
Results supported in the raw data? (Levels D, E)..... Yes No N/A
Samples properly prepared? (Levels D, E)..... Yes No N/A
Detection limits meet RDL? Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: CR - 777 over

Appendix 6

Additional Documentation Requested by Client

000039

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: ICP-2008 MS All possible metal

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Cadmium	7440-43-9	186.3407	93.170	% Recov	05/10/05	70.000	130.000	
MS	Chromium	7440-47-3	181.037	90.518	% Recov	05/10/05	70.000	130.000	
MS	Lead	7439-82-1	195.29	97.645	% Recov	05/10/05	70.000	130.000	
MS	Uranium	7440-61-1	198.099	98.049	% Recov	05/10/05	70.000	130.000	
MSD	Cadmium	7440-43-9	198.2407	99.120	% Recov	05/10/05	70.000	130.000	
MSD	Chromium	7440-47-3	187.437	93.719	% Recov	05/10/05	70.000	130.000	
MSD	Lead	7439-82-1	202.59	101.295	% Recov	05/10/05	70.000	130.000	
MSD	Uranium	7440-61-1	202.799	101.400	% Recov	05/10/05	70.000	130.000	
SPK-RPD	Cadmium	7440-43-9	99.120	6.189	RPD	05/10/05	0.000	20.000	
SPK-RPD	Chromium	7440-47-3	93.719	3.474	RPD	05/10/05	0.000	20.000	
SPK-RPD	Lead	7439-82-1	101.295	3.669	RPD	05/10/05	0.000	20.000	
SPK-RPD	Uranium	7440-61-1	101.400	3.360	RPD	05/10/05	0.000	20.000	
BATCH QC									
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L	05/10/05			U
BLANK	Chromium	7440-47-3	<4	n/a	ug/L	05/10/05			U
BLANK	Lead	7439-82-1	<0.2	n/a	ug/L	05/10/05			U
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/L	05/10/05			U
LCS	Cadmium	7440-43-9	139.9	109.297	% Recov	05/10/05	88.000	127.000	
LCS	Chromium	7440-47-3	72.59	104.448	% Recov	05/10/05	50.000	128.000	
LCS	Lead	7439-82-1	153.9	108.380	% Recov	05/10/05	87.000	120.000	
LCS	Uranium	7440-61-1	406.7	101.675	% Recov	05/10/05	89.000	107.000	

000040

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Radiochemistry - Data Package No. WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	See note 1
B1C771	4/28/05	Soil	C	See note 1
B1C774	4/28/05	Soil	C	See note 1
B1C775	4/28/05	Soil	C	See note 1
B1C776	4/28/05	Soil	C	See note 1
B1C777	4/28/05	Soil	C	See note 1

1 - Strontium-90, gamma spectroscopy and alpha spectroscopy.

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested by Client

000001

DATA QUALITY OBJECTIVES

- **Holding Times**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The maximum holding time for radiochemical analysis is 6 months.

All holding times were acceptable.

- **Laboratory (Method) Blanks**

Laboratory Blanks

Blank samples are analyzed to determine if positive results are due to laboratory reagent, sample container, or detector contamination. If blank analysis results indicate the presence of an analyte above the required detection limit (RDL), the following qualifiers are applied: All positive sample results less than five times the highest blank concentration are qualified as estimates and flagged "J"; sample results below the minimum detectable activity (MDA) are qualified as undetected and flagged "U"; sample results above the MDA and greater than five times the highest blank concentration are not qualified.

Due to method blank contamination, all uranium-235 results were qualified as estimates and flagged "J".

All other laboratory blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

- **Accuracy**

Accuracy is evaluated by analyzing distilled water or field samples spiked with known amounts of radionuclides. The sample activity as determined by analysis is compared to the known activity to assess accuracy. The acceptable laboratory control sample (LCS) and matrix spike (MS) recovery range is either 65-135% or 70-130%, depending on the analyte. In addition, samples may be spiked with a radiochemical tracer to assist in isolating the radioisotope of interest with the yield of the tracer being used in calculating sample activity. The acceptable range for tracer recovery is 20% to 105%. Spike sample results outside the above ranges result in associated sample results being qualified as estimates, rejected, or not qualified, depending on the activity of the individual sample.

000002

Due to the lack of an LCS analysis, all plutonium-238, uranium-233/234 and uranium-235 results were qualified as estimates and flagged "J".

All other accuracy results were acceptable.

- **Precision**

Analytical precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Precision may also be assessed using unspiked duplicate sample analyses. If both sample and replicate activities are greater than five times the contract required detection limit (CRDL) and the RPD is less than +/- 35 percent, the results are acceptable. If either activities are less than five times the CRDL, a control limit of less than or equal to two times the CRDL is used for soil samples and less than or equal to the CRDL for water samples. If either the original or replicate value is below the CRDL, the applicable control limits are less than or equal to the CRDL for water samples and less than or equal to two times the CRDL for soil samples. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All duplicate results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All reported laboratory detection levels met the analyte specific RTQL.

- **Completeness**

Data package SDG No. 50940 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

000003

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Due to method blank contamination, all uranium-235 results were qualified as estimates and flagged "J". Due to the lack of an LCS analysis, all plutonium-238, uranium-233/234 and uranium-235 results were qualified as estimates and flagged "J". Data flagged "J" is an estimate, but under the FHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

000005

Qualifiers which may be applied by data validators in compliance with the FHI statement of work are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected above the minimum detectable activity (MDA) in the sample. The value reported is the sample result corrected for sample dilution and moisture content by the laboratory. The data is usable for decision making purposes.
- UU - Indicates the compound or analyte was analyzed for and not detected at concentrations above the minimum detectable activity (MDA) in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate, but is usable for decision making purposes.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

000006

Appendix 2
Summary of Data Qualification

000007

RADIOCHEMISTRY/CHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Uranium-235	J	All	Blank contamination
Uranium-233/234 Uranium-235 Plutonium-238	J	All	No LCS analysis

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

000008

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000009

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case		SDG: WSCF20050940											
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Radiochemistry	RTQ	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Americium-241	1	0.0170	U	0.0330	U	0.00940	U	0.0120	U	0.0330	U	0.00330	U
Cobalt-60	0.05	-0.00670	U	-0.00297	U	0.000685	U	-0.00955	U	0.00284	U	-0.00181	U
Cesium-137	0.1	0.611		0.548		0.310		0.221		0.00308	U	0.0121	
Europium 152	0.1	0.00630	U	0.0182	U	-0.000565	U	0.0367	U	-0.0137	U	0.00251	U
Europium 154	0.1	0.0135	U	-0.0259	U	-0.0216	U	-0.0358	U	-0.00635	U	0.00158	U
Europium 155	0.1	-0.00948	U	0.0868		0.0113	U	0.0507	U	0.00232	U	0.0125	U
Plutonium-238	1	-0.0120	UJ	0.0170	UJ	-0.00890	UJ	0.00490	UJ	0.0150	UJ	0.0180	UJ
Plutonium-239/240	1	0.0220		0.0280		0.0550		0.00820	U	-0.00560	U	0.0130	
Strontium-89/90	1	0.520		0.330		-0.100	U	0.0320	U	1.10		0.300	U
Uranium-233/234	1	0.310	J	0.230	J	0.270	J	0.260	J	0.180	J	0.110	J
Uranium-235	1	0.0270	J	0.0230	J	0.0300	J	0.0150	J	0.00960	J	0.0200	J
Uranium-238	1	0.320		0.320		0.320		0.300		0.160		0.150	

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* - TDL exceeded

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize potential miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry													
W050001288	B1C789	GRP	TRENT	14696-10-2	Americium-241	SOIL	LA-508-471	U	0.0170	pCi/g	1.00	0.041	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+ - 0.028	pCi/g	1.00	0.0	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	-6.70e-03	pCi/g	1.00	0.014	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+ - 8.4e-03	pCi/g	1.00	0.0	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.611	pCi/g	1.00	0.014	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+ - 0.10	pCi/g	1.00	0.0	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	6.30e-03	pCi/g	1.00	0.043	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+ - 0.030	pCi/g	1.00	0.0	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	0.0135	pCi/g	1.00	0.044	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+ - 0.030	pCi/g	1.00	0.0	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	-9.48e-03	pCi/g	1.00	0.059	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+ - 0.036	pCi/g	1.00	0.0	05/02/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	-0.0120	pCi/g	1.00	0.055	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ - 0.030	pCi/g	1.00	0.0	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		0.0220	pCi/g	1.00	0.018	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+ - 0.015	pCi/g	1.00	0.0	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415		0.520	pCi/g	1.00	0.30	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+ - 0.47	pCi/g	1.00	0.0	05/11/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.310	pCi/g	1.00	0.018	05/10/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+ - 0.093	pCi/g	1.00	0.0	05/10/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	15117-98-1	Uranium-235	SOIL	LA-508-471	J	0.0270	pCi/g	1.00	5.2e-03	05/10/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+ - 0.018	pCi/g	1.00	0.0	05/10/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.320	pCi/g	1.00	4.8e-03	05/10/05 04/28/05 04/28/05
W050001288	B1C789	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ - 0.093	pCi/g	1.00	0.10	05/10/05 04/28/05 04/28/05
W050001287	B1C771	GRP	TRENT	14696-10-2	Americium-241	SOIL	LA-508-471	U	0.0330	pCi/g	1.00	0.037	05/11/05 04/28/05 04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+ - 0.028	pCi/g	1.00	0.0	05/11/05 04/28/05 04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	-2.97e-03	pCi/g	1.00	0.015	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 9.0e-03	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.548	pCi/g	1.00	0.015	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Ca-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.092	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	0.0182	pCi/g	1.00	0.041	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.041	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	-0.0259	pCi/g	1.00	0.047	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.029	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481		0.0888	pCi/g	1.00	0.055	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.048	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	0.0170	pCi/g	1.00	0.040	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.024	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		0.0280	pCi/g	1.00	4.7e-03	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+ 0.018	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415		0.330	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+ 0.43	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.230	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+ 0.071	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J	0.0230	pCi/g	1.00	5.1e-03	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.014	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.320	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.093	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	14598-10-2	Americium-241	SOIL	LA-508-471	U	8.40e-03	pCi/g	1.00	0.049	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.028	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	6.85e-04	pCi/g	1.00	0.010	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 6.1e-03	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.310	pCi/g	1.00	0.012	05/05/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 0.056	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	14683-23-9	SOIL	LA-508-481	U	-5.65e-04	pCi/g	1.00	0.037	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 5.6e-03	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	15585-10-1	SOIL	LA-508-481	U	-0.0216	pCi/g	1.00	0.034	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 0.022	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	14391-16-3	SOIL	LA-508-481	U	0.0113	pCi/g	1.00	0.063	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 0.037	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	13981-16-3	SOIL	LA-508-471	J	-8.90e-03	pCi/g	1.00	0.045	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-471		+ 0.023	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	PU-239/240	SOIL	LA-508-471		0.0550	pCi/g	1.00	4.8e-03	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-471		+ 0.024	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	SR-RAD	SOIL	LA-508-415	U	-0.100	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-415		+ 0.41	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	U-233/234	SOIL	LA-508-471	J	0.270	pCi/g	1.00	0.018	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-471		+ 0.081	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	15117-96-1	SOIL	LA-508-471	J	0.0300	pCi/g	1.00	5.0e-03	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-471		+ 0.017	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	U-238	SOIL	LA-508-471		0.320	pCi/g	1.00	4.6e-03	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	E,T,C	SOIL	LA-508-471		+ 0.093	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001288	B1C775	GRP TRENT	14596-10-2	SOIL	LA-508-471	U	0.0120	pCi/g	1.00	0.053	05/11/05	04/28/05	04/28/05
W050001288	B1C775	GRP TRENT	E,T,C	SOIL	LA-508-471		+ 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C775	GRP TRENT	10198-40-0	SOIL	LA-508-481	U	-9.55e-03	pCi/g	1.00	0.016	05/02/05	04/28/05	04/28/05
W050001288	B1C778	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 9.7e-03	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W060001289	B1C775	GRP TRENT	10045-97-3	SOIL	LA-508-481		0.221	pCi/g	1.00	0.020	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 0.039	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	14883-23-9	SOIL	LA-508-481	U	0.0367	pCi/g	1.00	0.049	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	E,T,C	SOIL	LA-508-481		+ 0.041	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	15585-10-1	Europlum-154	SOIL	LA-508-481	U	-0.0358	pCi/g	1.00	0.050	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Eu-164 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.036	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	14391-16-3	Europlum-166	SOIL	LA-508-481	U	0.0507	pCi/g	1.00	0.058	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.038	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	4.90e-03	pCi/g	1.00	0.055	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.031	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471	U <i>0.130</i>	8.20e-03	pCi/g	1.00	0.016	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Pu-238/240 AEA Total Cntg Err	SOIL	LA-508-471		+ 9.8e-03	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	U	0.0320	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+ 0.32	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.260	pCi/g	1.00	0.019	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+ 0.078	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	18117-98-1	Uranium-235	SOIL	LA-508-471	J	0.0150	pCi/g	1.00	0.014	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.012	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.300	pCi/g	1.00	4.7e-03	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.090	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14598-10-2	Americium-241	SOIL	LA-508-471	U	0.0330	pCi/g	1.00	0.045	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	2.84e-03	pCi/g	1.00	7.6e-03	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 4.2e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481	U	3.08e-03	pCi/g	1.00	8.4e-03	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 5.6e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14683-23-9	Europlum-152	SOIL	LA-508-481	U	-0.0137	pCi/g	1.00	0.023	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.015	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	15585-10-1	Europlum-154	SOIL	LA-508-481	U	-8.35e-03	pCi/g	1.00	0.023	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+ 0.015	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14391-16-3	Europlum-155	SOIL	LA-508-481	U	2.32e-03	pCi/g	1.00	0.035	05/04/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C778	GRP TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481	+ 0.021	pCi/g	1.00	0.0	06/04/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	13981-18-3	Plutonium-238	SOIL	LA-508-471	U J 0.0160	pCi/g	1.00	0.052	05/11/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471	+ 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471	U -5.60e-03	pCi/g	1.00	0.028	05/11/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471	+ 0.011	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	1.10	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ 0.50	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J 0.180	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471	+ 0.058	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	18117-96-1	Uranium-235	SOIL	LA-508-471	J 9.60e-03	pCi/g	1.00	5.2e-03	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471	+ 8.9e-03	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	U-238	Uranium-238	SOIL	LA-508-471	0.180	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471	+ 0.053	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	14598-10-2	Americium-241	SOIL	LA-508-471	U 3.30e-03	pCi/g	1.00	0.048	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471	+ 0.028	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U -1.81e-03	pCi/g	1.00	8.2e-03	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481	+ 4.8e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481	0.0121	pCi/g	1.00	8.3e-03	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ 7.2e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	14883-23-9	Europium-152	SOIL	LA-508-481	U 2.51e-03	pCi/g	1.00	0.027	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481	+ 0.018	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U 1.68e-03	pCi/g	1.00	0.027	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481	+ 0.015	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	14391-18-3	Europium-155	SOIL	LA-508-481	U 0.0125	pCi/g	1.00	0.038	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481	+ 0.023	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	13981-18-3	Plutonium-238	SOIL	LA-508-471	U J 0.0180	pCi/g	1.00	0.067	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471	+ 0.034	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001291	B1C777	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		0.0130	pCi/g	1.00	4.9e-03	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+ 0.010	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	U	0.300	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+ 0.39	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.110	pCi/g	1.00	0.022	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+ 0.041	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	15117-98-1	Uranium-235	SOIL	LA-508-471	J	0.0200	pCi/g	1.00	5.3e-03	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.014	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.150	pCi/g	1.00	4.9e-03	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+ 0.051	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05

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MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Sample Delivery Group	WSCF20050940
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F04-015
Data Deliverable	Summary Report

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.
- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.
- Sulfate - The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals - The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids - Analyzed for organic results correction.

pH - All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Uranium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Concentration	Count
<u>Uranium-234/ Uranium-235</u>				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
<u>Plutonium-238</u>				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Blank	QC
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americium-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Sample ID	Isotope	Recovery (Percent)
<u>Americium-243</u>			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
<u>Plutonium-242</u>			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
Sample	W050001286	Isotope	Percent Recovery (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
<u>Strontium-85</u>			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
<u>Uranium-232</u>			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	Tracer	Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

Hg - mercury
 IC - ion chromatography
 ICP - inductively coupled plasma
 ICP/AES - ICP/atomic emission spectroscopy
 ICP/MS - ICP/mass spectrometry
 Total U - total uranium
 AT/TB - total alpha/total beta
 AEA - Alpha Energy Analysis
 WTPH-G - Total Hydrocarbons-Gasoline

Am - americium
 Cm - curium
 Pu - plutonium
 Np - neptunium
 GEA - gamma energy analysis
 H3 - Tritium
 Sr - Strontium 89, 90
 WTPH-D - Total Hydrocarbons-Diesel
 TSS - Total Suspended Solids

5/30/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-124	PAGE 1 OF 2	
COLLECTOR Pope/Pfister/Tyre/Wberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE SN	DATA TURNAROUND 45 Days / 45 Days <i>AS</i>	
SAMPLING LOCATION 216-T-13; 10-11 ft		PROJECT DESIGNATION 200-NW-1 Characterization Sampling and Analysis - Soil				SAP NO. F04-015		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle				
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A				
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P
			NO. OF CONTAINER(S)		1	1	1	3	1	1
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770 20050940		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCR - 0002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B1C769	W050001286 SOIL	4/28/05	0930							
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS				
75AAL/ GEM 4-28-05		14:45	JA PRAZAR/ [Signature]		4-28-05 14:45					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME					
LABORATORY SECTION		RECEIVED BY				TITLE				
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD				DISPOSED BY				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FM-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO. FM-015	AIR QUALITY <input type="checkbox"/>	45 Days	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. <i>PMG 2/14/88</i> (1) IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045; (2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene) (4) Semi-VOA - 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-019-125	PAGE 1 OF 2													
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE SN	DATA TURNAROUND 45 Days / 45 Days - 1/2													
SAMPLING LOCATION 216-T-13; 10-11 ft		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>														
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle																
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A																
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None													
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P													
		NO. OF CONTAINER(S)		1	1	1	3	1	1													
		VOLUME		250mL	120mL	250mL	40mL	120mL	500mL													
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS													
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME																			
B1C771	SOIL	4/28/85	0930																			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS																
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS																		
JSPM/Pfister 4-28-85	14:45	TA FRAZIER	4/28/85 14:45																			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																			
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME																
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME																

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. FM-015	AIR QUALITY <input type="checkbox"/>	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis

PMG 2/14/05

(1)IC Antons - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, Trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						FD4-015-137		PAGE 1 OF 2		
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE BN		DATA TURNAROUND 45 Days / 45 Days		
SAMPLING LOCATION 216-T-13; 12-13 ft		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. FD4-015		AIR QUALITY <input type="checkbox"/>				
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144E510		METHOD OF SHIPMENT Government Vehicle						
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A						
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Settlement T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P			
		NO. OF CONTAINER(S)		1	1	1	3	1	1			
		VOLUME		250mL	120mL	250mL	40mL	120mL	500mL			
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: 81C/80		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCOs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1C774	SOIL	4-24-84	0955	X	X	X	X	X	X			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME							
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME							
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME							
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME							
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME							
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME							
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME						
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME						

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FM4-015-137	PAGE 2 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE SN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO. FM4-015	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. *PMG 2/14/05*

(1)IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOC - 8260A (TCL); VOC - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, TARS-1,2-Dichloroethylene)
(4)Semi-VOC -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-138	PAGE 1 OF 2												
COLLECTOR Pope/Pfister/Tyra/Wilberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N	DATA TURNAROUND 45 Days / 43 DAYS <i>18</i>												
SAMPLING LOCATION 216-T-13; 14-15 ft.		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>													
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle															
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A															
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water W1=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None											
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P											
			NO. OF CONTAINER(S)		1	1	1	3	1	1											
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL											
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C781		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS												
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME																		
B1C775	SOIL	11-28-05	1015	X	X	X	X	X	X												
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS															
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS																	
<i>Spate/Aspen</i>	<i>11-28-05 1445</i>	<i>Vincent Bines</i>	<i>12/2/05 1545</i>																		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME																		
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME															
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME															

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. *PMG 2/14/05*

(1) IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in Phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045;
 (2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
 (3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butyl acetate, trans-1,2-Dichloroethylene)
 (4) Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range);
 (5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-139	PAGE 1	OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N	DATA TURNAROUND	
SAMPLING LOCATION 216-T-13; 19-20 ft.		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>	45 Days / 45-DAYS 4.26.05	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle				
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A				
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	
		TYPE OF CONTAINER		gG	gG	gG	gGs*	gG	P	
		NO. OF CONTAINER(S)		1	1	1	3	1	1	
		VOLUME		250mL	120mL	250mL	40mL	120mL	500mL	
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C782		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCNs - 8002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	
B1C778	SOIL	4-28-05	1300	X	X	X	X	X	X	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS						
J. Pope	4-28-05 1443	V. L. ...	4/28/05 1445							
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME							
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME							
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME							
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME							
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME							
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Plister/Tyra/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE SN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. <i>PMG 2/14/05</i> (1)IC Anions - 300.0 (Fluoride, Nitrate, Nitrite, Nitrogen in Nitrate, Phosphorous in phosphate, Sulfate) (Total Cyanide - 9010; pH (Soil) - 9045; (2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Hexane, TRANS-1,2-Dichloroethylene) (4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;					

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Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-140		PAGE 1 OF 2		
COLLECTOR Pope/Pfister/Tyra/Wilberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N		DATA TURNAROUND 45 Days / 45 Days		
SAMPLING LOCATION 216-T-13; 24-25 ft		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		FIELD LOGBOOK NO. COA 119144ES10		SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>		<i>[Signature]</i>		
ICE CHEST NO.		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		METHOD OF SHIPMENT Government Vehicle						
SHIPPED TO Waste Sampling & Characterization		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
MATRIX* A=Air OL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Seiment T=Tissue V=Vegetation W=Water WI=Wipe X=Other		POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		TYPE OF CONTAINER		gG	gG	gG	gGs*	gG	P	
		NO. OF CONTAINER(S)		1	1	1	3	1	1			
		VOLUME		250ml	120ml	250ml	40ml	120ml	500ml			
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C783		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCW - 8062	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1C777	SOIL	4-28-05	1330	+	+	+	+	+	+			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
J. POPE		4-28-05 1445		V. [Signature]		4/28/05 1445						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
LABORATORY SECTION		RECEIVED BY				TITLE				DATE/TIME		
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD				DISPOSED BY				DATE/TIME		

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Favor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FR-015-140	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Phelan/Tyler/Wiberg	CS Carboc	372-9630	TRENT, SJ	BN	45 DAYS
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	
216-T-13; 24-25 R	200-NW-1 Characterization Sampling and Analysis - Sol		F04-015	<input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT		
		119148510	Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
SPECIAL INSTRUCTIONS ** The laboratory is to report both hexosane and diesel range compounds from the WPH-D analysis. (1)IC Anions - 300.0 (nitrate, nitrite, nitrophenol, nitrobenzene, phosphate, sulfite), Free Cyanide - 9999; pH (50) - 9049; (2)ICP/MS - 200.8 (TAL) (Calcium, Chromium, Copper, Silver), ICP/MS - 200.8 (Add-on) (Lead, Barium) (3)VOC - 8260A (TL); VOC - 8150A (Add-On) (1-hexanol, cis-1,2-dichloroethane, n-butylamine, trans-1,2-dichloroethylene) (4)Semi-VOC - 8270A (Tributyl phosphate) TPH-Gasoline Range - WPH-G; TPH-Diesel Range - WPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium, Americium-241; Strontium-90 - Total S;					

4-6025-01(03/02)

Appendix 5

Data Validation Supporting Documentation

000037

**APPENDIX A
RADIOCHEMICAL DATA VALIDATION CHECKLIST**

VALIDATION LEVEL:	A	B	<u>C</u>	D	E
PROJECT:	200-MW-1		DATA PACKAGE: 50940		
VALIDATOR:	RLT	LAB:	WSEF	DATE:	6/18/05
			SDG:	50940	
ANALYSES PERFORMED					
Gross Alpha/Beta	Strontium-90	Technetium-99	Alpha Spectroscopy	Gamma Spectroscopy	
Total Uranium	Radium-22	Tritium			
SAMPLES/MATRIX					
	BIC769	BIC771	BIC774	BIC775	
	BIC776	BIC777			
					Soil

1. Completeness N/A

Technical verification forms present?..... Yes No N/A

Comments: _____

2. Initial Calibration (Levels D, E) N/A

Instruments/detectors calibrated?..... Yes No N/A
 Initial calibration acceptable? Yes No N/A
 Standards NIST traceable?..... Yes No N/A
 Standards Expired? Yes No N/A
 Calculation check acceptable? Yes No N/A

Comments: _____

3. Continuing Calibration (Levels D, E)

N/A

Calibration checked within required frequency? Yes No N/A

Calibration check acceptable? Yes No N/A

Calibration check standards traceable? Yes No N/A

Calibration check standards expired? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments: _____

4. Background Counts (Levels D, E).....

N/A

Background Counts checked within required frequency? Yes No N/A

Background Counts acceptable? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments: _____

5. Blanks (Levels B, C, D, E) N/A

Method blank analyzed within required frequency? Yes No N/A

Method blank results acceptable? Yes No N/A

Analytes detected in method blank? Yes No N/A

Field blank(s) analyzed? Yes No N/A

Field blank results acceptable? Yes No N/A

Analytes detected in field blank(s)? Yes No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No N/A

Comments: U-235 - ^{U-235} all MB

_____ No MB

6. Laboratory Control Samples or Blank Spike Samples (Levels C, D, E) N/A

LCS /BSS analyzed within required frequency? Yes No N/A

LCS/BSS recoveries acceptable? Yes No N/A

LCS/BSS traceable? (Levels D,E) Yes No N/A

LCS/BSS expired? (Levels D,E) Yes No N/A

LCS/BSS levels correct? (Levels D,E) Yes No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No N/A

Comments: no for U-238, U233/234 or U235 LCS - J all

7. Chemical Carrier Recovery (Levels C, D, E) N/A

Chemical carrier added? Yes No N/A

Chemical recovery acceptable? Yes No N/A

Chemical carrier traceable? (Levels D, E) Yes No N/A

Chemical carrier expired? (Levels D, E) Yes No N/A

Transcription/Calculation errors? (Levels D, E)..... Yes No N/A

Comments: _____

8. Tracer Recovery (Levels C, D, E) N/A

Tracer added?..... Yes No N/A

Tracer recovery acceptable? Yes No N/A

Tracer traceable? (Levels D, E) Yes No N/A

Tracer expired? (Levels D, E)..... Yes No N/A

Transcription/Calculation errors? (Levels D, E)..... Yes No N/A

Comments: _____

9. Matrix Spikes (Levels C, D, E)..... N/A

Matrix spike analyzed? Yes No N/A

Spike recoveries acceptable? Yes No N/A

Spike source traceable? (Levels D, E) Yes No N/A

Spike source expired? Levels D, E)..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E)..... Yes No N/A

Comments: _____

10. Duplicates (Levels C, D, E) N/A

Duplicates Analyzed at required frequency? Yes No N/A

RPD Values Acceptable? Yes No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No N/A

Comments: _____

11. Field QC Samples (Levels C, D E) N/A

Field duplicate sample(s) analyzed? Yes No N/A

Field duplicate RPD values acceptable? Yes No N/A

Field split sample(s) analyzed? Yes No N/A

Field split RPD values acceptable? Yes No N/A

Performance audit sample(s) analyzed? Yes No N/A

Performance audit sample results acceptable? Yes No N/A

Comments: _____ *No Field QC*

12. Holding Times (All levels)

Are sample holding times acceptable? Yes No N/A

Comments: _____

13. Results and Detection Limits (All Levels)..... N/A

Results reported for all required sample analyses?..... Yes No N/A

Results supported in raw data?(Levels D, E)..... Yes No N/A

Results Acceptable? (Levels D, E) Yes No N/A

Transcription/Calculation errors? (Levels D, E)..... Yes No N/A

MDA's meet required detection limits? Yes No N/A

Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: _____

Appendix 6

Additional Documentation Requested by Client

000044

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: Gamma Energy Analysis-grd H2O

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001285									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Cobalt-60	10198-40-0	U2.29e-3	n/a	RPD	05/03/05	0.000	20.000	
DUP	Cesium-137	10045-97-3	1.20e+00	0.830	RPD	05/03/05	0.000	20.000	
DUP	Europium-152	14683-23-9	U8.36e-3	n/a	RPD	05/03/05	0.000	20.000	
DUP	Europium-154	15585-10-1	U-1.0e-2	n/a	RPD	05/03/05	0.000	20.000	
DUP	Europium-155	14391-16-3	6.34e-02	n/a	RPD	05/03/05	0.000	20.000	
BATCH QC									
BLANK	Cobalt-60	10198-40-0	U-9.8e-4	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Cesium-137	10045-97-3	U-1.5e-3	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Europium-152	14683-23-9	U-2.0e-2	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Europium-154	15585-10-1	U-4.7e-3	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Europium-155	14391-16-3	U-1.8e-3	n/a	pCi/g	05/03/05	-10.000	1000.000	
LCS	Cobalt-60	10198-40-0	4.41e+03	105.251	% Recov	05/03/05	80.000	120.000	
LCS	Cesium-137	10045-97-3	3.94e+03	110.056	% Recov	05/03/05	80.000	120.000	

000045

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: Americium by AEA

SAF Number: F04-015
 Sample Date: 04/27/05
 Receive Date: 04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Americium-241	14598-10-2	U1.7e-02	n/a	RPD	05/11/05	0.000	20.000	
BATCH QC									
BLANK	Americium-241	14598-10-2	U2.3e-02	n/a	pCi/g	05/11/05	-10.000	1000.000	
LCS	Americium-241	14598-10-2	4.6e+01	85.634	% Recov	05/11/05	75.000	125.000	

000046

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: Strontium 89/90

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001285									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Strontium-89/90	SR-RAD	1.1	34.043	RPD	05/11/05	0.000	20.000	
BATCH QC									
BLANK	Strontium-89/90	10098-97-2	2.5E-02	0.025	pCi/g	05/11/05	-10.000	300.000	
LCS	Strontium-89/90	10098-97-2	70.7	99.437	% Recov	05/11/05	80.000	120.000	

000047

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: Plutonium Isotopics by AEA

SAF Number: F04-015
 Sample Date: 04/27/05
 Receive Date: 04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Plutonium-238	13881-16-3	U9.4e-03	n/a	RPD	05/11/05	0.000	20.000	
DUP	Pu-239/240 by AEA	PU-239/240	U1.3e-02	n/a	RPD	05/11/05	0.000	20.000	
BATCH QC									
BLANK	Plutonium-238	13981-16-3	U-2.4e-2	n/a	PCT	05/11/05	0.000	1000.000	
BLANK	Pu-239/240 by AEA	PU-239/240	U9.1e-03	n/a	pCi/g	05/11/05	-10.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	6.1e+01	103.658	% Recov	05/11/05	75.000	125.000	

000048

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: Uranium Isotopics by AEA

SAF Number: F04-015
 Sample Date: 04/27/05
 Receive Date: 04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Uranium-233/234	U-233/234	3.2e-01	0.000	RPD	05/10/05	0.000	20.000	
DUP	U-233/234 AEA Total Cntg Error	E,T,C	29.9	1.031	RPD	05/10/05	0.000	1000.000	
DUP	Uranium-235	15117-96-1	3.4e-02	22.951	RPD	05/10/05	0.000	20.000	
DUP	U-235 by AEA Total Cntg Error	E,T,C	58.8	0.948	RPD	05/10/05	0.000	1000.000	
DUP	Uranium-238	U-238	2.0e-01	17.544	RPD	05/10/05	0.000	20.000	
DUP	U-238 by AEA Total Cntg Error	E,T,C	30.8	1.027	RPD	05/10/05	0.000	1000.000	
BATCH QC									
BLANK	Uranium-238	24878-82-8	U8.1e-03	n/a	pCi/g	05/10/05	-10.000	1000.000	
LCS	Uranium-238	24878-82-8	9.2e+01	121.340	% Recov	05/10/05	75.000	125.000	

000049

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Semivolatile - Data Package No.WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	See note 1
B1C771	4/28/05	Soil	C	See note 1
B1C774	4/28/05	Soil	C	See note 1
B1C775	4/28/05	Soil	C	See note 1
B1C776	4/28/05	Soil	C	See note 1
B1C777	4/28/05	Soil	C	See note 1

1 - Semivolatiles by 8270, TPH-D (diesel and kerosene) and gasoline range organics by 8015B.

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested by Client

000001

DATA QUALITY OBJECTIVES

- **Holding Times/Sample Preservation**

Analytical holding times were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirement for semivolatile organics are extraction within 14 days of the date of sample collection and analysis within 40 days from the date of extraction. Method 8015B requires analysis within 14 days.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were met.

- **Method Blanks**

Method blank analyses are conducted to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. Analytical results for analytes present in any sample at less than five times the concentration of that analyte found in the associated blank are qualified as non-detects and flagged "U". Common laboratory contaminants present in samples at less than ten times the concentration of that analyte found in the associated blank are qualified as non-detects. If a sample result is less than the CRQL and is less than five times (or less than ten times for lab contaminants) the highest associated blank result, the sample result value is raised to the CRQL level and qualified as undetected "U".

All method blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

000002

- Accuracy

Matrix Spike/Matrix Spike Duplicate & Blank Spike

Matrix spike/matrix spike duplicate and blank spike sample analyses are used to assess the analytical accuracy of the reported data. Matrix spike/matrix duplicate results are used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike/matrix spike duplicate analyses are performed in duplicate using five compounds for which percent recoveries must be within a range of 50-150% or within laboratory control limits. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Undetected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

Due to an LCS recovery outside QC limits (62.6%), all phenol results were qualified as estimates and flagged "J".

Due to an LCS recovery outside QC limits (59.5%), all pentachlorophenol results were qualified as estimates and flagged "J".

All other matrix spike/matrix spike duplicate and blank spike results were acceptable.

Surrogate Recovery

The analyses of surrogate compounds provide a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the EPA CLP program. If two surrogates of the same class of compounds (base/neutral or acid) are out of control limits, all associated sample results greater than the contract required quantitation limit (CRQL) are qualified as estimates and flagged "J". Sample results less than the CRQL and below the lower control limit are qualified as estimates and flagged "UJ". Sample results less than the CRQL with recoveries above the upper control limit require no qualification. If a surrogate recovery is less than 10%, detects are qualified as estimates and flagged "J" and nondetects are rejected and flagged "UR".

Due to a surrogate recovery outside QC limits (45.2%), the phenol result in sample B1C774 was qualified as an estimate and flagged "J".

All other surrogate results were acceptable.

000003

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike (MS)/matrix spike duplicate (MSD) results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Samples results must be within RPD limits of +/-35%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All MS/MSD RPD results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQL's) to ensure that laboratory detection levels meet the required criteria. All analytes met the RTQL.

- **Completeness**

Data package No. 50940 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

000004

MINOR DEFICIENCIES

Due to an LCS recovery outside QC limits (62.6%), all phenol results were qualified as estimates and flagged "J". Due to an LCS recovery outside QC limits (59.5%), all pentachlorophenol results were qualified as estimates and flagged "J". Due to a surrogate recovery outside QC limits (45.2%), the phenol result in sample B1C774 was qualified as an estimate and flagged "J". Data flagged "J" is an estimate, but under the FHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

000005

Appendix 1

Glossary of Data Reporting Qualifiers

000006

Qualifiers which may be applied by data validators in compliance with the FHI validation SOW are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the same quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UU - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.
- NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).
- N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications usable for decision-making purposes).

000007

Appendix 2

Summary of Data Qualification

000008

SEMIVOLATILE DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Phenol	J	B1C774	Surrogate recovery
Pentachlorophenol Phenol	J	All	LCS recovery

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

000009

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000010

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case:		SDG: WSCF20050940											
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Analysis Date		5/10/05		5/10/05		5/10/05		5/10/05		5/10/05		5/10/05	
Semivolatile/8015B	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
4-Nitrophenol		<190	U	<190	U	<180	U	<180	U	<180	U	<180	U
1,4-Dichlorobenzene		<290	U	<290	U	<280	U	<280	U	<270	U	<270	U
Phenol		<150	UJ	<150	UJ	<150	UJ	<140	UJ	<140	UJ	<140	UJ
1,2,4-Trichlorobenzene		<200	U	<200	U	<190	U	<190	U	<190	U	<190	U
2,4-Dinitrotoluene		<120	U	<120	U	<110	U	<110	U	<110	U	<110	U
Pyrene		<170	U	<170	U	<160	U	<160	U	<160	U	<160	U
4-Chloro-3-methylphenol		<100	U	<100	U	<99.0	U	<97.0	U	<96.0	U	<96.0	U
N-Nitroso-di-n-propylamine		<160	U	<160	U	<160	U	<160	U	<150	U	<150	U
Acenaphthene		<150	U	<150	U	<150	U	<140	U	<140	U	<140	U
Pentachlorophenol		<160	UJ	<160	UJ	<150	UJ	<150	UJ	<150	UJ	<150	UJ
2-Chlorophenol		<170	U	<170	U	<160	U	<160	U	<160	U	<160	U
Tributylphosphate	3300	<150	U	<160	U	<150	U	<150	U	<150	U	<150	U
TPH-D	5000	<4100	U	<4100	U	<4000	U	<3900	U	<3900	U	<3900	U
Kerosene	5000	<4100	U	<4100	U	<4000	U	<3900	U	<3900	U	<3900	U
TPH-G (gasoline range organics)	5000	<250	U	<250	U	<250	U	<250	U	<250	U	<250	U

000011

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
Organic														
W050001286	B1C769	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	<	250	ug/kg	1.00	2.5e+02	05/11/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	110	ug/kg	1.00	1.1e+02	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	14441-18-5	Aroclor-1232	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11098-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	11169-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	290	ug/kg	1.00	2.9e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	200	ug/kg	1.00	2.0e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	120	ug/kg	1.00	1.2e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	100	ug/kg	1.00	1.0e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	621-84-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	126-73-8	Tributyl phosphates	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-456	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	79-01-6	Trichloroethane	SOIL	LA-523-456	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-456	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05
W050001286	B1C769	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-456	U	<	2.20	ug/kg	1.00	2.2	05/10/05 04/28/05 04/28/05

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Report WGPP/ver. 1.1

Groundwater Remediation Program

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K U/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C768	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001288	B1C769	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001286	B1C769	156-60-6	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	156-50-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769		TPHDIESEL Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C769		TPHKEROSENE Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771		TPHGASOLINE Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001287	B1C771	12674-11-2	Aroclor-1018	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1232	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1242	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1248	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1254	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		Aroclor-1262	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	11100-11-1	Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771		4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		N-Nitrosodl-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771		Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-05-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	540-59-0	1,2-Dichloroethane(Total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

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000014

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-16-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001287	B1C771	156-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C774	12874-11-2	Aroclor-1218	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001288	B1C774	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	12872-28-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	11198-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 260	ug/kg	1.00	2.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

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K. W. Zelos

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015; F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-458	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	129-00-0	Pyrene	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-458	U	< 99.0	ug/kg	1.00	99	05/10/05	04/28/05	04/28/05
W050001288	B1C774	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-458	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	83-32-9	Acenaphthene	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	87-86-5	Pentachlorophenol	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	95-57-8	2-Chlorophenol	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	126-73-8	Tributyl phosphate	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	75-35-4	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	79-01-8	Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	100-41-4	Bibenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	10081-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	107-08-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	540-59-0	1,2-Dichloroethene (Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

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U - Analyzed for but not detected above listing criteria.

DF=Dilution Factor

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	67-86-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-58-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-06-9	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-80-5	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C775	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C775	GRP	TRENT	12674-11-2	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12672-29-0	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11098-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

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DF = Dilution Factor

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive			
W050001289	B1C775	GRP	TRENT	37324-23-5	Aroclor-1282	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11100-11-1	Aroclor-1260	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	97.0	ug/kg	1.00	97	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	821-84-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-26-4	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-01-6	Trichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-88-1	Toluene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-80-7	Chlorobenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10081-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
W050001289	B1C778	GRP	TRENT	127-18-4	Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	57-64-1	Acetone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	79-00-8	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	71-38-3	1-Butanol	SOIL	LA-523-455 U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	156-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001289	B1C778	GRP	TRENT	12674-11-2	Aroclor-1018	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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K

6/20/07

K

6/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C778	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001290	B1C778	11141-16-8	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	53489-21-8	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	12872-28-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	11098-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	100-02-7	4-Nitrophenol	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	108-48-7	1,4-Dichlorobenzene	SOIL	LA-523-458	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	108-95-2	Phenol	SOIL	LA-523-458	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-458	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	129-00-0	Pyrene	SOIL	LA-523-458	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-458	U	< 98.0	ug/kg	1.00	98	05/10/05	04/28/05	04/28/05
W050001290	B1C778	621-84-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	83-32-9	Acenaphthene	SOIL	LA-523-458	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	87-88-5	Pentachlorophenol	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	95-57-8	2-Chlorophenol	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	126-73-8	Tributyl phosphate	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	78-06-4	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	78-01-6	Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	76-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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RQ = Result Qualifier

B - The analyte < the RDL but > - the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C778	169-89-6	trans-1,2-Dichloroethylene	SOIL	LA-523-456	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	169-89-2	cis-1,2-Dichloroethylene	SOIL	LA-523-456	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C778	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001291	B1C777	12874-11-2	Aroclor-1018	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	12672-28-8	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	108-95-2	Phenol	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	129-00-0	Pyrene	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	69-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 98.0	ug/kg	1.00	98	05/10/05	04/28/05	04/28/05
W050001291	B1C777	821-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	75-35-4	1,1-Dichloroethane	SOIL	LA-523-456	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but >= the MDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001291	B1C777	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/06	04/28/06	04/28/05
W050001291	B1C777	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 41.0	ug/kg	1.00	41	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05

Rz 6/20/05

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MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF= Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Sample Delivery Group	WSCF20050940
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F04-015
Data Deliverable	Summary Report

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.
- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.
- Sulfate - The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals - The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids - Analyzed for organic results correction.

pH - All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Uranium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Activity	Count Rate
<u>Uranium-234/ Uranium-235</u>				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
<u>Plutonium-238</u>				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Result	Units
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americium-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Sample ID	Isotope	Percent Recovery
<u>Americium-243</u>			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
<u>Plutonium-242</u>			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
			Percent
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
<u>Strontium-85</u>			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
<u>Uranium-232</u>			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample ID	Lab Sample	Tracer	Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

Hg - mercury
 IC - ion chromatography
 ICP - inductively coupled plasma
 ICP/AES - ICP/atomic emission spectroscopy
 ICP/MS - ICP/mass spectrometry
 Total U - total uranium
 AT/TB - total alpha/total beta
 AEA - Alpha Energy Analysis
 WTPH-G - Total Hydrocarbons-Gasoline

Am - americium
 Cm - curium
 Pu - plutonium
 Np - neptunium
 GEA - gamma energy analysis
 H3 - Tritium
 Sr - Strontium 89, 90
 WTPH-D - Total Hydrocarbons-Diesel
 TSS - Total Suspended Solids

5/31/03

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST FOM-915-124		PAGE 1 OF 2
COLLECTOR Filer Hanford Inc.	COMPANY CONTACT CS Cerrick	PROJECT COORDINATOR TREAT, SJ
SAMPLING LOCATION 216-T-13; 10-11 R	TELEPHONE NO. 372-9638	PRICE CODE BN AIR QUALITY <input type="checkbox"/>
ICE CHEST NO.	PRODUCT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil	DATA TURNAROUND 45 Days / 45 Days
SHIPPED TO Waste Sampling & Characterization	FIELD LOOKBOOK NO. COA 119144ES10	METHOD OF SHIPMENT Government Vehicle
MATRIX A-Air D-Drum L-Liquid S-Solid O-Oil S-Sediment T-Tissue V-Vapor W-Water X-Other	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A
PRESERVATION 4C	Cool °C 4C	Cool °C 4C
TYPE OF CONTAINER 1	Cool °C 4C	Cool °C 4C
NO. OF CONTAINER(S) 1	Cool °C 4C	Cool °C 4C
VOLUME 150mL	Cool °C 4C	Cool °C 4C
SAMPLE ANALYSIS Radiocative To: B1C70	Cool °C 4C	Cool °C 4C
SPECIAL HANDLING AND/OR STORAGE 20050940	Cool °C 4C	Cool °C 4C
SAMPLE NO. B1C709 1,06 Spec 1240 SOIL	Cool °C 4C	Cool °C 4C
CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RECEIVED BY / REMOVED FROM TBA/1/4/03 4:45	RECEIVED BY / STORED IN TA/POZ/AG/1/4/03 4:45	DATE/TIME 4-28-03 14:45
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	DATE/TIME
LABORATORY SECTION	RECEIVED BY	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME

Flier Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FM-015-124	PAGE 2 OF 2
COLLECTOR Pope/Fisher/Tyler/Wiberg	COMPANY CONTACT CS Ceatco	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 10-11 R	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAP NO. FM-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO. COA 15914-RES10		METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Wasta Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
SPECIAL INSTRUCTIONS * The laboratory is to report both hexane and diesel range compounds from the WPH-D analysis. (VIC Aroms - 300.0) (Pivalde-Nonylphenyl-Nitro-Nitrogen-In-Waxes, Phosphorous in phosphate, Sulfate/Sulfate-oxide-9999; pH (Soil) - 9045; (2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) (CP/MS - 200.8 (Add-on) (Lead, Uranium)) (3)VDA - 8260A (TEL); VDA - 8260A (Add-On) (1-Shunt, ds-1,2-Dichloroethane, n-Pentadecane, Hexa-1,2-Dichloroethylene) (4)Semi-VDA - 8270A (Add-On) (Triethyl phosphate) TH-Gasoline Range - WPH-G; TH-Diesel Range - WPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Caesium-137, Cobalt-60, Europium-152, Europium-154, Barium-135) Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;					

4-0002-64 (03/03)

Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FO4-015-125		PAGE 1 OF 2	
COLLECTOR Pope/Phaser/Tyre/Widberg		COMPANY CONTACT CS Caslock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ	
SAMPLING LOCATION 216-T-13; 10-11 R		PROJECT DESIGNATION 200-PW-1 Characterization Sampling and Analysis - Sol		SAF NO. FO4-015		PRICE CODE BN	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119146510		AIR QUALITY <input type="checkbox"/>	
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		METHOD OF SHIPMENT Government Vehicle	
MATRIX* A-Air B-Liquor C-Liquid D-Solids E-Solids F-Liquid G-Oil H-Solids I-Trace J-Vegetation K-Residue L-Water M-Other		PRESERVATION		Cod #C		Cod #C	
POSSIBLE SAMPLE HAZARDOUS/ REMARKS N/A		TYPE OF CONTAINER		Cod #C		Cod #C	
SPECIAL HANDLING AND/OR STORAGE Radioactive The To: B1C770		NO. OF CONTAINER(S)		Cod #C		Cod #C	
SAMPLING DATE		SAMPLING TIME		Cod #C		Cod #C	
B1C771		SOIL		Cod #C		Cod #C	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		SPECIAL INSTRUCTIONS	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
JSM/Phaser 4-28-75		JA FORZIER (Blood Test)		14:45		18/05/14	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
REMOVED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
LABORATORY SECTION		RECEIVED BY		TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY		DATE/TIME	

A-600-618(03/03)

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FORM-915-125	PAGE 2 OF 2
COLLECTOR	Poppe/Platz/Tym/Wiberg	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE
SAMPLING LOCATION	216-T-13; 10-11 ft	CS Contact	372-9638	TRENT, SJ	8N
ICE CHEST NO.		PROJECT DESIGNATION		SAF NO.	AIR QUALITY
		200-HV-1 Characterization Sampling and Analysis - Soil		FM-015	<input type="checkbox"/>
		FIELD LOGBOOK NO.	CDA	METHOD OF SHIPMENT	45 Days
			119144ES10	Government Vehicle	
SHIPPED TO	Waste Sampling & Characterization	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	
SPECIAL INSTRUCTIONS					
<p>** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.</p> <p>(1)C Andrs - 300.0 (Acetylene Nitrogen in Methane, Propane in Ethane, Butane in Propane, Butane in Ethane)</p> <p>(2)C7/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) (C7/MS - 200.8 (Add-on) (Lead, Uranium)</p> <p>(3)VOA - 8260A (TCL) (VOC - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ethylbenzene, m-xylene, p-xylene, toluene)</p> <p>(4)Semi-VOA - 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)</p> <p>(5)Gamma Spectroscopy (Caesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Fluorine; Isotopic Uranium; Americium-241; Strontium-90 - Total Sr</p>					

PMG 2/14/05

A-5003-41X(03/05)

COLLECTOR		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 2	
Fluor Hanford Inc.		COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	SN	DATA TURNAROUND
Pop/Pfister/Tyre/Wiberg		CS Oarfock	377-9638	TRENT, SJ	8N		45 Days
SAMPLING LOCATION		PROJECT DESIGNATION		SAF NO.	AIR QUALITY		45 Days
216-T-13; 12-13 R		200-WP-1 Characterization Sampling and Analysis - Soil		F04-015	<input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT			
			119144ES10	Government Vehicle			
SHIPPED TO		OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.			
Waste Sampling & Characterization		N/A		N/A			
MATRIX*	POSSIBLE SAMPLE HAZARDS/REMARKS	PRESERVATION	Cool °C	Cool °C	Cool °C	Cool °C	None
A-Air	N/A						
B-L-Drum							
C-Liquids							
D-S-Drum							
E-Solids							
F-Liquid							
G-Oil							
H-S-Sol							
I-S-Sediment							
J-Tissue							
K-Vegetation							
L-Water							
M-Wipe							
N-Other							
SPECIAL HANDLING AND/OR STORAGE		VOLUME					
Radioactive To TC: B1C780		250ml	120ml	40ml	120ml	500ml	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1C774	SOIL	4-29-08	0955				
CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

A-503-SUR(07/97)

Favor Hartford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PM-015-137	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA
Popa/Pfeiser/Tyra/Wrborg	CS Conbo	372-9638	TRENT, SJ	BN	TURNAROUND
SAMPLING LOCATION	PROJECT DESIGNATION		SAP NO.	AIR QUALITY	45 Days
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Sol		PM-015	<input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	CDA	METHOD OF SHIPMENT		
		119144ES10	Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
SPECIAL INSTRUCTIONS					
<p>PMG 2/14/05</p> <p>* The laboratory is to report both benzene and diesel range compounds from the WTRH-D analysis. (1) VC Analysis - 300.0 (Pentane-Methyl-Nonyl-Alkyls, Phosphorus in phosphate, Sulfate) (2) CP/MS - 200.8 (VAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 20.8 (As-G) (Lead, Uranium) (3) VOA - 8260A (TL); VOA - 8260A (Ad-G) (1,2-Dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2,2,2-pentachloroethane, 1,1,1,2-tetrachloroethane) (4) Semi-VOA - 8270A (Ad-G) (Tributyl phosphate) TPH-Gasoline Range - WTRH-G; TPH-Diesel Range - WTRH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - benzene range) (5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-90 - Total Sr;</p>					

4-600-61809(03)

Fluor Membrand Inc		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FORM-015-138	PAGE 1 OF 2
COLLECTOR	Poppe/Fischer/Tyras/Wiberg	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE \$1N
SAMPLING LOCATION	216-1-13, 14-15 R	PROJECT DESIGNATION	372-9638	TRENT, NJ	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO.		FIELD LOGBOOK NO.		SHIP NO.	DATA TURNAROUND
				FOA-015	45 Days / -49 DAYS
SHIPPED TO	Waste Sampling & Characterization	OFFSITE PROPERTY NO.	119144E510	METHOD OF SHIPMENT	Government Vehicle
Possible Sample Hazards/Remarks	N/A	Preservation		Bill of Lading/Air Bill No.	N/A
Matrix*		Type of Container	5G		
		No. of Container(s)	1		
		Volume	250ml		
		Sample Analysis	SEE ITEM (U) IN SPECIAL INSTRUCTIONS		
		Sample Date	11-28-65		
		Matrix*	SOIL		
Chain of Possession		Special Handling and/or Storage	Radioactive TR To: BUC761		
Relinquished by/Removed from	DATE/TIME	Received by/Stored in	DATE/TIME	Special Instructions	DATE/TIME
Relinquished by/Removed from	DATE/TIME	Received by/Stored in	DATE/TIME	SEE ITEM (U) IN SPECIAL INSTRUCTIONS	DATE/TIME
Relinquished by/Removed from	DATE/TIME	Received by/Stored in	DATE/TIME	SEE ITEM (U) IN SPECIAL INSTRUCTIONS	DATE/TIME
Relinquished by/Removed from	DATE/TIME	Received by/Stored in	DATE/TIME	SEE ITEM (U) IN SPECIAL INSTRUCTIONS	DATE/TIME
Relinquished by/Removed from	DATE/TIME	Received by/Stored in	DATE/TIME	SEE ITEM (U) IN SPECIAL INSTRUCTIONS	DATE/TIME
Relinquished by/Removed from	DATE/TIME	Received by/Stored in	DATE/TIME	SEE ITEM (U) IN SPECIAL INSTRUCTIONS	DATE/TIME
Laboratory Section	RECEIVED BY	TITLE		DATE/TIME	
Final Sample Disposition	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

000037

A-603-61R(03/03)

COLLECTOR		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 2 OF 2	
Filer Hensford Inc.		PROJECT COORDINATOR		PRICE CODE 8N	
Pope/Pridler/Tym/Wiberg		TRENT, NJ		DATA TURNAROUND	
SAMPLING LOCATION		SAF NO.		AIR QUALITY <input type="checkbox"/>	
216-T-13; 1-4-15 R.		F04-015		45 Days	
ICE CREST NO.		METHOD OF SHIPMENT			
		Government Vehicle			
SHIPPED TO		BILL OF LADING/AIR BILL NO.			
Waste Sampling & Characterization		N/A			
SPECIAL INSTRUCTIONS					
<p>as The laboratory is to report both benzene and diesel range compounds from the WTH-D analysis.</p> <p>(1)IC Metals - 300.0 (Mercury-Manganese-Nickel-Microgram-Weight, Phosphorus in phosphates, Sulfate) Total Cyanide - 3000; pH (SoD) - 9045;</p> <p>(2)ICPMS - 200.8 (VAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (A46-on) (Lead, Uranium)</p> <p>(3)VOA - 8260A (TEL); VOA - 8260A (Add-On) (1-8-benzof, cis-1,2-Dichloroethylene, n-Substancene, Water), 2-Dichloroethylene</p> <p>(4)Semi-VOA - 8270A (Add-On) (Thiophyl phosphates) TPH-Gasoline Range - WTH-G; TPH-Diesel Range - WTH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - benzene range)</p> <p>(5)Gamma Spectrometry (Cesium-137, Cobalt-60, Europium-152, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;</p>					
COMPANY CONTACT		TELEPHONE NO.			
CS Ozerlock		372-9638			
PROJECT DESIGNATION		COA			
200-MW-1 Characterization Sampling and Analysis - SoF		11914HE510			
FIELD LOGBOOK NO.					
OFFSITE PROPERTY NO.					
N/A					

PMG 2/14/05

A-9903-61A(02/03)

COLLECTOR Floor Hartford Inc. Pope/Wise/Tyr/Wiberg		COMPANY CONTACT CS Casback TELEPHONE NO. 372-9638		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST PROJECT COORDINATOR TRENT, SJ SAF NO. F04-015 METHOD OF SHIPMENT Government Vehicle		F04-015-139 PRICE CODE 8N AIR QUALITY <input type="checkbox"/>	PAGE 1 OF 2 DATA TURBAMOUND 45 Days / 1985 45-8875 4-24-85
SAMPLING LOCATION 216-T-13; 19-20 ft ICE CHEST NO.		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil FIELD LOGBOOK NO.		COA 119144ES10			
SHIPPED TO West Sampling & Characterization		OPPOSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A-Water D-Dioxin U-Urils DS-Dioxin S-Solids L-Liquid O-Oil S-Sediment SC-Sediment T-Tissue V-Vegetation W-Water Wh-Water X-Other		POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION Cool °C 5G		None	
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: BIC782		TYPE OF CONTAINER		Cool °C 5G		5G	
NO. OF CONTAINER(S)		VOLUME		Cool °C 1		1	
SAMPLE ANALYSIS		SAMPLE DATE		Cool °C 250ml		250ml	
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: BIC782		SAMPLE TIME		Cool °C 120ml		120ml	
SAMPLE NO.		MATRIX*		Cool °C 40ml		40ml	
BIC776		SOIL		Cool °C 500ml		500ml	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS SEE ITEM (3) IN SPECIAL INSTRUCTIONS SEE ITEM (4) IN SPECIAL INSTRUCTIONS SEE ITEM (5) IN SPECIAL INSTRUCTIONS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS SEE ITEM (3) IN SPECIAL INSTRUCTIONS SEE ITEM (4) IN SPECIAL INSTRUCTIONS SEE ITEM (5) IN SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM 5/10/85 RELINQUISHED BY/REMOVED FROM		DATE/TIME 9-2-85 DATE/TIME		RECEIVED BY/STORED IN Y. L. ... RECEIVED BY/STORED IN		DATE/TIME 4/28/85 DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
LABORATORY SECTION		RECEIVED BY		TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY		DATE/TIME	

000039

4-609-610(3/85)

Filer Hanford Inc		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FOA-015-138	PAGE 1	OF 2
COLLECTOR Pope/Prister/Tyre/Wiberg	COMPANY CONTACT CS Deerfoot	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TREAT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days	
SAMPLING LOCATION 216-7-13; 19-20 R	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. FOA-015	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.	FIELD LOGBOOK NO. COA 119144E51D		METHOD OF SHIPMENT Government Vehicle			
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WPHD analysis. (1)IC Anions - 300.0 (Phosphate, Nitrate, Nitrite, Nitroacetate, Nitrate, Phosphorous in phosphate, Sulfate) (2)IC/MS - 200.8 (AL) (Cadmium, Chromium, Copper, Silver, Bismuth, Lead, Uranium) (3)VOC - 1260A (TCL); VOC - 8260A (Add-On) (1-Butanol, Di-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene) (4)Semi-VOC - 8270A (Add-On) (Triethyl phosphate) TPH-Gasoline Range - WPH-6; TPH-Diesel Range - WPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;						

PN6 7/14/05

A-600-61103(03)

COLLECTOR
Filer Hartford Inc.

COMPANY CONTACT
CS Garlock

PROJECT COORDINATOR
TRENT, SJ

PRICE CODE
SH

DATA
TURNAROUND
45 DAYS /
45 Days

TELEPHONE NO.
372-9636

SAF NO.
FO-015

METHOD OF SHIPMENT
Government Vehicle

OFFSITE PROPERTY NO.
119146510

PROJECT DESIGNATION
200-MH-1 Characterization Sampling and Analysis - Soil

FIELD LOGBOOK NO.
COA

BIOTIN
SOIL

SAMPLE DATE
4-28-05

SAMPLE TIME
1330

BIOTIN

SOIL

4-28-05

1330

1

250ml

120ml

250ml

40ml

COOLANT

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NO. OF CONTAINER(S)

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VOLUME

250ml

120ml

120ml

250ml

250ml

250ml

250ml

250ml

SPECIAL HANDLING AND/OR STORAGE

Radioactive To: BIC783

SEE ITEM (9) IN SPECIAL INSTRUCTIONS

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LABORATORY SECTION RECEIVED BY
FINAL SAMPLE DISPOSITION DEPOSED BY
A-600-614(03/02)

Filer Hartford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-140	PAGE 2 OF 2
COLLECTOR	Pope/Pfeiffer/Tyler/Hiberg	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE
SAMPLING LOCATION		CS Contact	372-9638	TRENT, NJ	BIN
216-T-13; 24-25 R.		PROJECT DESIGNATION		SAF NO.	AIR QUALITY
ICE CHEST NO.		210-444-1 Characterization Sampling and Analysis - Sol		TQ-015	<input type="checkbox"/>
		FIELD LOGBOOK NO.	COA		45 DAYS
			119144ES10	METHOD OF SHIPMENT	
SHIPPED TO		OFFSITE PROPERTY NO.		Government Vehicle	
Waste Sampling & Characterization		N/A		BILL OF LADING/AIR BILL NO.	
				N/A	
<p>SPECIAL INSTRUCTIONS</p> <p>** The laboratory is to report both benzene and diesel range compounds from the WTRH-D analysis.</p> <p>(1)IC Anions - 200.0 (Mercury, tungsten in nitrate, Phosphorus in phosphate, Sulfide) Feed-Synthetic-9999; pH (Soil) - 9045;</p> <p>(2)ICP/MS - 200.0 (AL) (Calcium, Chromium, Copper, Silver) ICP/MS - 200.0 (Add-On) (Lead, Uranium)</p> <p>(3)VOA - 8250A (TEL); VOA - 8250A (Add-On) (1-Subst); 06-1,2-Dichlorobenzene, 4-ethylbenzene; trans-1,2-Dichloroethene)</p> <p>(4)Sem-VOA - 8270A (Add-On) (Triethyl phosphate) TPH-Gasoline Range - WTRH-G; TPH-Diesel Range - WTRH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - benzene range)</p> <p>(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-90 -- Total S;</p>					

4-600-4 (REV 02)

Appendix 5

Data Validation Supporting Documentation

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GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	200-mw-1		DATA PACKAGE: 50940		
VALIDATOR:	TLD	LAB: WSCF	DATE: 6/18/05		
		SDG:	50940		
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270	8015	SW-846 8270 (TCLP)
SAMPLES/MATRIX					
BIC769		BIC771		BIC774	
BIC776		BIC777			
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes No N/A

Comments: _____

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

GC/MS tuning/performance check acceptable? Yes No N/A

Initial calibrations acceptable? Yes No N/A

Continuing calibrations acceptable? Yes No N/A

Standards traceable? Yes No N/A

Standards expired? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) Yes No N/A
 Calibration blank results acceptable? (Levels D, E) Yes No N/A
 Laboratory blanks analyzed? Yes No N/A
 Laboratory blank results acceptable? Yes No N/A
 Field/trip blanks analyzed? (Levels C, D, E) Yes No N/A
 Field/trip blank results acceptable? (Levels C, D, E) Yes No N/A
 Transcription/calculation errors? (Levels D, E) Yes No N/A
 Comments: no FB

4. ACCURACY (Levels C, D, and E)

Surrogates/system monitoring compounds analyzed? Yes No N/A
 Surrogate/system monitoring compound recoveries acceptable? Yes No N/A
 Surrogates traceable? (Levels D, E) Yes No N/A
 Surrogates expired? (Levels D, E) Yes No N/A
 MS/MSD samples analyzed? Yes No N/A
 MS/MSD results acceptable? Yes No N/A
 MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
 MS/MSD standards? (Levels D, E) Yes No N/A
 LCS/BSS samples analyzed? Yes No N/A
 LCS/BSS results acceptable? Yes No N/A
 Standards traceable? (Levels D, E) Yes No N/A
 Standards expired? (Levels D, E) Yes No N/A
 Transcription/calculation errors? (Levels D, E) Yes No N/A
 Performance audit sample(s) analyzed? Yes No N/A
 Performance audit sample results acceptable? Yes No N/A

Comments: Surr phenol J 74
LCS phenol J all NO PAS
LCS pentachlorophenol J all

GC/MS ORGANIC DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

MS/MSD samples analyzed? Yes No N/A
MS/MSD RPD values acceptable? Yes No N/A
MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
MS/MSD standards expired? (Levels D, E) Yes No N/A
Field duplicate RPD values acceptable? Yes No N/A
Field split RPD values acceptable? Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: _____

6. SYSTEM PERFORMANCE (Levels D and E)

Internal standards analyzed? Yes No N/A
Internal standard areas acceptable? Yes No N/A
Internal standard retention times acceptable? Yes No N/A
Standards traceable? Yes No N/A
Standards expired? Yes No N/A
Transcription/calculation errors? Yes No N/A

Comments: _____

7. HOLDING TIMES (all levels)

Samples properly preserved? Yes No N/A
Sample holding times acceptable? Yes No N/A

Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Compound identification acceptable? (Levels D, E) Yes No N/A
Compound quantitation acceptable? (Levels D, E) Yes No N/A
Results reported for all requested analyses? Yes No N/A
Results supported in the raw data? (Levels D, E) Yes No N/A
Samples properly prepared? (Levels D, E) Yes No N/A
Laboratory properly identified and coded all TIC? (Levels D, E) Yes No N/A
Detection limits meet RDL? Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: _____

9. SAMPLE CLEANUP (Levels D and E)

GPC cleanup performed? Yes No N/A
GPC check performed? Yes No N/A
GPC check recoveries acceptable? Yes No N/A
GPC calibration performed? Yes No N/A
GPC calibration check performed? Yes No N/A
GPC calibration check retention times acceptable? Yes No N/A
Check/calibration materials traceable? Yes No N/A
Check/calibration materials Expired? Yes No N/A
Analytical batch QC given similar cleanup? Yes No N/A
Transcription/Calculation Errors? Yes No N/A

Comments: _____

Appendix 6

Additional Documentation Requested by Client

000048

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	1,2,4-Trichlorobenzene	120-82-1	1360.2	93.200	% Recov	05/10/05	46.000	107.000	
MS	1,4-Dichlorobenzene	106-46-7	1381.6	94.800	% Recov	05/10/05	30.000	96.000	
MS	2,4-Dinitrotoluene	121-14-2	1258.1	88.200	% Recov	05/10/05	59.000	108.000	
MS	2-Fluorophenol	367-12-4	1486.9	102.000	% Recov	05/10/05	42.000	105.000	
MS	Acenaphthene	83-32-9	1436.7	98.400	% Recov	05/10/05	61.000	116.000	
MS	4-Chloro-3-methylphenol	59-50-7	1634.5	74.800	% Recov	05/10/05	61.000	108.000	
MS	2-Chlorophenol	95-57-8	1976.0	90.200	% Recov	05/10/05	66.000	108.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	1321.4	90.500	% Recov	05/10/05	71.000	114.000	
MS	2-Fluorobiphenyl	321-60-8	1519.4	104.000	% Recov	05/10/05	56.000	122.000	
MS	Phenol	108-95-2	1664.5	78.000	% Recov	05/10/05	42.000	111.000	
MS	Nitrobenzene-d5	4165-80-0	1288.6	89.000	% Recov	05/10/05	64.000	111.000	
MS	4-Nitrophenol	100-02-7	1924.1	87.900	% Recov	05/10/05	32.000	118.000	
MS	Pentachlorophenol	87-88-5	2145.7	98.000	% Recov	05/10/05	62.000	114.000	
MS	Phenol-d5	4165-82-2	1053.4	72.200	% Recov	05/10/05	54.000	120.000	
MS	Pyrene	129-00-0	1367.2	93.700	% Recov	05/10/05	68.000	118.000	
MS	2,4,6-Tribromophenol	118-79-8	1165.2	78.800	% Recov	05/10/05	24.000	122.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	1389.1	95.200	% Recov	05/10/05	35.000	150.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	1371.3	94.000	% Recov	05/10/05	46.000	107.000	
MSD	1,4-Dichlorobenzene	106-46-7	1308.7	89.700	% Recov	05/10/05	30.000	96.000	
MSD	2,4-Dinitrotoluene	121-14-2	1142.3	78.300	% Recov	05/10/05	59.000	108.000	
MSD	2-Fluorophenol	367-12-4	1483.2	102.000	% Recov	05/10/05	42.000	105.000	
MSD	Acenaphthene	83-32-9	1420.0	87.300	% Recov	05/10/05	61.000	116.000	
MSD	4-Chloro-3-methylphenol	59-50-7	1728.4	79.000	% Recov	05/10/05	61.000	108.000	
MSD	2-Chlorophenol	95-57-8	1897.4	86.700	% Recov	05/10/05	66.000	106.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	1305.2	89.400	% Recov	05/10/05	71.000	114.000	
MSD	2-Fluorobiphenyl	321-60-8	1544.3	106.000	% Recov	05/10/05	56.000	122.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Phenol	108-95-2	1474.2	87.300	% Recov	05/10/05	42.000	111.000	
MSD	Nitrobenzene-d5	4165-60-0	1301.0	89.100	% Recov	05/10/05	84.000	111.000	
MSD	4-Nitrophenol	100-02-7	2012.4	91.900	% Recov	05/10/05	32.000	118.000	
MSD	Pentachlorophenol	87-86-5	1959.9	89.500	% Recov	05/10/05	62.000	114.000	
MSD	Phenol-d5	4165-62-2	915.25	62.700	% Recov	05/10/05	54.000	120.000	
MSD	Pyrene	129-00-0	1379.2	94.500	% Recov	05/10/05	66.000	118.000	
MSD	2,4,6-Tribromophenol	118-79-6	1193.5	81.800	% Recov	05/10/05	24.000	122.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	1399.2	95.900	% Recov	05/10/05	35.000	150.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	94.000	0.855	RPD	05/10/05	0.000	20.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	89.700	5.317	RPD	05/10/05	0.000	20.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	78.300	9.605	RPD	05/10/05	0.000	20.000	
SPK-RPD	2-Fluorophenol	367-12-4	102.000	0.000	RPD	05/10/05	0.000	20.000	
SPK-RPD	Acenaphthene	83-32-8	97.300	1.124	RPD	05/10/05	0.000	20.000	
SPK-RPD	4-Chloro-3-methylphenol	68-50-7	79.000	5.729	RPD	05/10/05	0.000	20.000	
SPK-RPD	2-Chlorophenol	95-67-8	86.700	3.957	RPD	05/10/05	0.000	20.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-84-7	89.400	1.223	RPD	05/10/05	0.000	20.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	106.000	1.906	RPD	05/10/05	0.000	20.000	
SPK-RPD	Phenol	108-95-2	87.300	12.142	RPD	05/10/05	0.000	20.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	89.100	0.112	RPD	05/10/05	0.000	20.000	
SPK-RPD	4-Nitrophenol	100-02-7	91.900	4.449	RPD	05/10/05	0.000	20.000	
SPK-RPD	Pentachlorophenol	87-86-5	89.500	9.087	RPD	05/10/05	0.000	20.000	
SPK-RPD	Phenol-d5	4165-62-2	82.700	14.085	RPD	05/10/05	0.000	20.000	
SPK-RPD	Pyrene	129-00-0	94.500	0.860	RPD	05/10/05	0.000	20.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	81.800	2.475	RPD	05/10/05	0.000	20.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	95.900	0.733	RPD	05/10/05	0.000	20.000	
SURR	2-Fluorophenol	367-12-4	1393.5	95.500	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1486.9	102.000	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	1252.4	85.900	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	854.36	65.400	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1072.8	73.800	% Recov	05/10/05	24.000	122.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
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Lab ID: W050001287
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Terphenyl-d14 (7Cl)	98904-43-9	1488.8	103.000	% Recov	06/10/05	35.000	150.000	
SURR	2-Fluorophenol	367-12-4	1405.8	95.800	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1415.3	96.500	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-80-0	1176.1	80.200	% Recov	06/10/05	64.000	111.000	
SURR	Phenol-d5	4165-82-2	864.41	58.900	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1226.0	83.600	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1488.1	100.000	% Recov	05/10/05	35.000	150.000	

Lab ID: W050001288
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol	367-12-4	1332.8	94.600	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1393.5	98.900	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-80-0	1073.8	76.200	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-82-2	637.44	45.200	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1098.2	77.900	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1362.6	96.700	% Recov	06/10/05	35.000	150.000	

Lab ID: W050001289
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol	367-12-4	1244.0	89.800	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1239.6	89.500	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-80-0	975.81	70.400	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-82-2	873.12	63.000	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	981.72	69.400	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1285.8	92.800	% Recov	05/10/05	35.000	150.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	2-Fluorophenol	367-12-4	1105.4	80.500	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1186.8	86.500	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	938.21	68.400	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	768.40	56.000	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	813.53	59.300	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7CI)	98904-43-9	1207.7	88.000	% Recov	05/10/05	35.000	150.000	
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	2-Fluorophenol	367-12-4	1438.4	105.000	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1365.9	98.900	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	1104.7	80.600	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	1125.3	82.100	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1117.2	81.500	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7CI)	98904-43-9	1406.4	103.000	% Recov	05/10/05	35.000	150.000	
BATCH QC									
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 180	n/a	ug/Kg	05/10/05			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 270	n/a	ug/Kg	05/10/05			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 110	n/a	ug/Kg	05/10/05			U
BLANK	2-Fluorophenol	367-12-4	1354.7	102.000	% Recov	05/10/05	42.000	105.000	
BLANK	Acenaphthene	83-32-8	< 140	n/a	ug/Kg	05/10/05			U
BLANK	4-Chloro-3-methylphenol	58-50-7	< 93	n/a	ug/Kg	05/10/05			U
BLANK	2-Chlorophenol	95-67-8	< 150	n/a	ug/Kg	05/10/05			U
BLANK	N-Nitrosodi-n-propylamine	921-64-7	< 150	n/a	ug/Kg	05/10/05			U
BLANK	2-Fluorobiphenyl	321-60-8	1394.4	105.000	% Recov	05/10/05	56.000	122.000	
BLANK	Phenol	108-95-2	< 140	n/a	ug/Kg	05/10/05			U

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
 Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Nitrobenzene-d5	4165-60-0	1321.9	99.100	% Recov	05/10/05	64.000	111.000	
BLANK	4-Nitrophenol	100-02-7	< 170	n/a	ug/Kg	05/10/05			U
BLANK	Pentachlorophenol	87-88-5	< 150	n/a	ug/Kg	06/10/05			U
BLANK	Phenol-d5	4165-62-2	929.22	69.700	% Recov	05/10/05	54.000	120.000	
BLANK	Pyrene	129-00-0	< 160	n/a	ug/Kg	05/10/05			U
BLANK	Tributyl phosphate	126-73-8	< 140	n/a	ug/Kg	05/10/05			U
BLANK	2,4,6-Tribromophenol	118-79-6	906.74	68.000	% Recov	05/10/05	24.000	122.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	1285.5	96.400	% Recov	05/10/05	35.000	150.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	1236.8	82.800	% Recov	05/10/05	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	1232.0	92.400	% Recov	05/10/05	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	1130.4	84.800	% Recov	05/10/05	59.000	108.000	
LCS	2-Fluorophenol	387-12-4	1302.0	97.700	% Recov	05/10/05	50.000	110.000	
LCS	Acenaphthene	83-32-9	1299.5	87.500	% Recov	05/10/05	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	1329.8	66.500	% Recov	06/10/05	61.000	108.000	
LCS	2-Chlorophenol	95-57-8	1594.8	79.700	% Recov	05/10/05	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	1042.6	78.200	% Recov	05/10/05	71.000	114.000	
LCS	2-Fluorobiphenyl	321-80-8	1347.7	101.000	% Recov	05/10/05	58.000	109.000	
LCS	Phenol	108-95-2	1251.8	62.600	% Recov	05/10/05	67.000	105.000	
LCS	Nitrobenzene-d5	4165-60-0	1056.2	79.200	% Recov	05/10/05	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	1393.7	69.700	% Recov	05/10/05	32.000	118.000	
LCS	Pentachlorophenol	87-88-5	1190.9	59.500	% Recov	06/10/05	62.000	114.000	
LCS	Phenol-d5	4165-62-2	828.50	62.100	% Recov	05/10/05	59.000	116.000	
LCS	Pyrene	129-00-0	1248.4	93.600	% Recov	05/10/05	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	1021.1	76.600	% Recov	05/10/05	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	1305.0	97.900	% Recov	05/10/05	60.000	120.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001285									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	ortho-Terphenyl Surr	84-15-1	27954	110.000	% Recov	05/12/05	70.000	130.000	
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	141570	112.000	% Recov	05/12/05	76.000	125.000	
MSD	ortho-Terphenyl Surr	84-15-1	26282	103.000	% Recov	05/12/05	70.000	130.000	
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	135570	107.000	% Recov	05/12/05	76.000	125.000	
SPK-RPD	ortho-Terphenyl Surr	84-15-1	103.000	6.573	RPD	05/12/05	0.000	20.000	
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	107.000	4.588	RPD	05/12/05	0.000	20.000	
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	25058	92.100	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001287									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	21872	79.400	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	24784	93.600	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001289									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	24773	96.500	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	21531	83.600	% Recov	05/12/05	70.000	130.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl	Surr	84-15-1	23674	92.100	% Recov	05/12/05	70.000	130.000
BATCH QC									
BLANK	Kerosene		TPHKEROSENE	< 3800	n/a	ug/Kg	05/12/05		U
BLANK	ortho-Terphenyl	Surr	84-15-1	23166	92.700	% Recov	05/12/05	70.000	130.000
BLANK	Total Pet. Hydrocarbons Diesel		TPHDIESEL	< 3800	n/a	ug/Kg	05/12/05		U
LCS	Kerosene		TPHKEROSENE	107780	86.200	% Recov	05/12/05	70.000	130.000
LCS	ortho-Terphenyl	Surr	84-15-1	23237	92.900	% Recov	05/12/05	70.000	130.000

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: NWTPH-GX TPH Gasoline Range

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	RPD	05/11/05	0.000	20.000	U
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	4370	115.000	% Recov	05/11/05	50.000	150.000	
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3500	92.105	% Recov	05/11/05	60.000	150.000	
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	92.105	22.110	RPD	05/11/05	0.000	20.000	
BATCH QC									
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	mg/L	05/11/05	0.000	300.000	U
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	4000	115.942	% Recov	05/11/05	85.000	115.000	

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Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Volatile - Data Package No.WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	Volatile Organics by 8260B
B1C771	4/28/05	Soil	C	Volatile Organics by 8260B
B1C774	4/28/05	Soil	C	Volatile Organics by 8260B
B1C775	4/28/05	Soil	C	Volatile Organics by 8260B
B1C776	4/28/05	Soil	C	Volatile Organics by 8260B
B1C777	4/28/05	Soil	C	Volatile Organics by 8260B

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested by Client

DATA QUALITY OBJECTIVES

- **Holding Times/Sample Preservation**

Analytical holding times were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are

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as follows: Soil samples must be analyzed within 14 days of the date of sample collection.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

- **Blanks**

Method blank analyses are conducted to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples of a given matrix. No contaminants should be present in the method blank. Analytical results for analytes present in any sample at less than five times the concentration of that analyte found in the associated blank are qualified as non-detects and flagged "U". Common laboratory contaminants present in samples at less than ten times the concentration of that analyte found in the associated blank are qualified as non-detects. If a sample result is less than the project quantitation limit (MDL) and is less than five times (or less than ten times for laboratory contaminants) the highest associated blank result, the sample result value is raised to the MDL, qualified as undetected and flagged "U".

All method blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike/Matrix Spike Duplicate & Blank Spike

Matrix spike/matrix spike duplicate and blank spike analyses are used to assess the analytical accuracy of the reported data. The matrix spike/matrix spike duplicate are used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike/matrix spike duplicate analyses are performed in duplicate using the target compounds for which percent recoveries must be within 50-150%. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J".

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Undetected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

All accuracy and blank spike results were acceptable.

Surrogate Recovery

The analysis of surrogate compounds provides a measure of system performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the laboratory program. When a surrogate compound recovery is out of the control window, all positively identified target compounds associated with the unacceptable surrogate recoveries are qualified as estimates and flagged "J". Undetected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Samples with surrogate recoveries less than ten percent are qualified as estimates and flagged "J" for detects, and rejected and flagged "UR" for nondetects. Undetected compounds with surrogate recoveries greater than the upper control limit require no qualification. Surrogates are not required for formaldehyde analysis.

All surrogate recovery results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Sample results must be within RPD limits of +/- 35%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All MS/MSD RPD results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

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- **Detection Limits**

Reported analytical detection levels are compared against the required target quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All analytes met the RTQL.

- **Completeness**

Data package No. 50940 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

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Qualifiers which may be applied by data validator in compliance with the BHI validation SOW are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for dilution and moisture content by the laboratory.
- UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.
- NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).
- N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

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Appendix 2

Summary of Data Qualification

000007

VOLATILE ORGANIC DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE <u>1</u> OF <u>1</u>
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

000008

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000009

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case:		SDG: WSCF20050940											
Sample Number	B1C769		B1C771		B1C774		B1C775		B1C776		B1C777		
Remarks													
Sample Date	4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		
VOA	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1-Dichloroethene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Trichloroethene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Benzene	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Toluene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chlorobenzene	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1-Dichloroethane	10	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Ethylbenzene	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Styrene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
cis-1,3-Dichloropropene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
trans-1,3-Dichloropropene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,2-Dichloroethane	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
4-Methyl-2-pentanone		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Dibromochloromethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Tetrachloroethene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Xylenes (total)		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,2-Dichloroethene (total)		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Carbon Tetrachloride	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
2-Hexanone		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Acetone	20	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chloroform	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1,1-Trichloroethane	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Bromomethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chloromethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chloroethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Vinyl Chloride		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Methylene Chloride	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Carbon Disulfide		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Bromoform		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Bromodichloromethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,2-Dichloropropane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
2-Butanone		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1,2-Trichloroethane	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1,2,2-Tetrachloroethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1-Butanol		<44.0	U	<44.0	U	<42.0	U	<42.0	U	<41.0	U	<41.0	U
trans-1,2-Dichloroethylene	1	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
cis-1,2-Dichloroethylene	1	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U

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REVISED
7/3/05

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize mis-interpretation of results. All other qualifiers shown were applied during validation.

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
Organic														
W050001286	B1C789	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	12672-28-6	Aroclor-1248	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	11098-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456 U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	108-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456 U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456 U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456 U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456 U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456 U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	621-84-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456 U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	87-88-5	Pentachlorophenol	SOIL	LA-523-456 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456 U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	138-73-8	Tributyl phosphate	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-456 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-456 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-456 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-456 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

R
6/20/05

MDL = Minimum Detection Limit
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B - The analyte < the RDL but > = the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C789	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W060001286	B1C789	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	10081-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	10081-02-8	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	540-59-0	1,2-Dichloroethane(Total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	56-23-6	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-16-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C789	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C769	GRP TRENT 79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT 79-34-6	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT 71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT 156-80-6	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT 156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 12674-11-2	Aroclor-1018	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 11141-18-6	Aroclor-1232	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 53489-21-0	Aroclor-1242	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 11096-82-6	Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 108-95-2	Phenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 129-00-0	Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 621-64-7	N-Nitrosodl-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT 87-86-6	Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP	TRENT	95-57-8	Z-Chlorophenol	SOIL	LA-523-455	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	128-73-8	Tributyl phosphite	SOIL	LA-523-455	U	< 180	ug/kg	1.00	1.0e+00	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-35-4	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-01-6	Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10081-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10081-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	67-68-3	Chloroform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - indicates results that have NOT been validated; + - indicates more than six qualifier symbols

Report WGPP/ver. 1.1

Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	78-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	71-36-3	trans-1,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	71-36-3	1-Butanol	SOIL	LA-523-455 U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	TPH DIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	TPH KEROSENE	Kerosene	SOIL	NWTPH U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	TPH GASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	12874-11-2	Aroclor-1010	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	11104-29-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	12872-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456 U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	108-95-2	Phenol	SOIL	LA-523-456 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456 U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

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Report WGPP/ver. 1.1
Groundwater Remediation Program

JR 6/20/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-458	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-458	U	< 160	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-458	U	< 99.0	ug/kg	1.00	89	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-458	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	128-72-8	Tributyl phosphate	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	107-08-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	67-84-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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Report WGPP/ver. 1.1
Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001288	B1C774	GRP	TRENT	67-86-3	Chloroform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455 U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	168-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001288	B1C774	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

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MDL = Minimum Detection Limit

RQ = Result Qualifier

DF = Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 1.1
Groundwater Remediation Program

B - The analyte < the RDL but >= the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
W050001289	B1C775	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	100-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	280	ug/kg	1.00	2.8e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	10	ug/kg	1.00	1.1e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	69-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	97	ug/kg	1.00	97	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	821-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	98-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	128-75-0	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	78-01-8	Trichloroethene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05
W050001289	B1C775	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-456	U	<	2.10	ug/kg	1.00	2.1	05/10/05 04/28/05 04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze	Sample	Receive	
					Method	RQ								
W050001289	B1C775	GRP TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W060001289	B1C775	GRP TRENT	540-58-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	56-23-6	Carbon tetrachloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	591-78-8	2-Hexanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	67-64-1	Acetone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	67-66-3	Chloroform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	71-55-8	1,1,1-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	74-83-9	Bromomethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	74-87-3	Chloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	75-00-3	Chloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	71-36-3	1-Butanol	SOIL	LA-523-455 U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	156-80-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001289	B1C775	GRP TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.9e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	TPHXEROSENE	Kerosene	SOIL	NWTPH	U	3.9e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-455 U	U	250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-455 U	U	61.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C778	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	12872-28-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001280	B1C776	GRP	TRENT	11098-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	08/13/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001280	B1C778	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-458	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-458	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-458	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-458	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	128-00-0	Pyrene	SOIL	LA-523-458	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	58-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-458	U	< 98.0	ug/kg	1.00	98	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W060001290	B1C778	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-458	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	95-67-8	2-Chlorophenol	SOIL	LA-523-458	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	128-78-8	Tributyl phosphate	SOIL	LA-523-458	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	108-80-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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MDL=Minimum Detection Limit
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Groundwater Remediation Program

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JR
6/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	GRP	TRENT	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze Sample Receive		
							Method	RQ							
W050001290	B1C778	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	10081-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	10081-02-8	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	540-59-0	1,2-Dichloroethane(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	55-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	591-78-8	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	71-85-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C778	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 41.0	ug/kg	1.00	41	05/10/05	04/28/05	04/28/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	TPHDISEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443 U	< 250	ug/kg	1.00	2.6e+02	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	12674-11-2	Aroclor-1018	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	11096-82-6	Aroclor-1260	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-458 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-458 U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	108-95-2	Phenol	SOIL	LA-523-458 U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-458 U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-458 U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	129-00-0	Pyrene	SOIL	LA-523-458 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-458 U	< 96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	621-84-7	N-Nitrosodi-n-propylamine	SOIL	LA-523-458 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	83-32-9	Acenaphthene	SOIL	LA-523-458 U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-458 U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-458 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	120-73-6	Tributyl phosphate	SOIL	LA-523-458 U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but >= the IDL/MDL (Inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015; F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001291	B1C777	GRP TRENT	79-01-8	Trichloroethene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	71-43-2	Benzene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	108-88-3	Toluene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	100-42-5	Styrene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	109-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	67-64-1	Acetone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	67-66-3	Chloroform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	74-83-9	Bromomethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	74-87-3	Chloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-00-3	Chloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP TRENT	75-25-2	Bromoform	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
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U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001291	B1C777	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	79-34-6	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	71-36-3	1 Butanol	SOIL	LA-523-455 U	< 41.0	ug/kg	1.00	41	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455 U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05	
W050001291	B1C777	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90E+03	ug/kg	1.00	3.9E+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPH KEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90E+03	ug/kg	1.00	3.9E+03	05/12/05	04/28/05	04/28/05

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MDL = Minimum Detection Limit
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B - The analyte < the RDL but > = the IDL/MDL (inorganic)

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DF = Dilution Factor

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Sample Delivery Group	WSCF20050940
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F04-015
Data Deliverable	Summary Report

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.
- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.
- Sulfate - The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals - The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids - Analyzed for organic results correction.

pH - All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Uranium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Concentration	Count
<u>Uranium-234/ Uranium-235</u>				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
<u>Plutonium-238</u>				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
Number	Sample	Isotope	Result	Unit
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americium-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Sample	Isotope	Percent Recovery
<u>Americium-243</u>			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
<u>Plutonium-242</u>			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
			Percent Recovery (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
<u>Strontium-85</u>			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
<u>Uranium-232</u>			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	Tracer	Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

Hg - mercury
 IC - ion chromatography
 ICP - inductively coupled plasma
 ICP/AES - ICP/atomic emission spectroscopy
 ICP/MS - ICP/mass spectrometry
 Total U - total uranium
 AT/TB - total alpha/total beta
 AEA - Alpha Energy Analysis
 WTPH-G - Total Hydrocarbons-Gasoline

Am - americium
 Cm - curium
 Pu - plutonium
 Np - neptunium
 GEA - gamma energy analysis
 H3 - Tritium
 Sr - Strontium 89, 90
 WTPH-D - Total Hydrocarbons-Diesel
 TSS - Total Suspended Solids

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FD4-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfeifer/Tyra/Wiberg	COMPANY CONTACT CS Ceatlock	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN
SAMPLING LOCATION 216-T-12; 10-11 R	PROJECT DESIGNATION 200-MTF-1 Characterization Sampling and Analysis - Soil	SAP NO. FD4-015	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO.	FIELD LOGBOOK NO. COA 11914HE10	METHOD OF SHIPMENT Government Vehicle	DATA TURNAROUND 45 Days
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A	
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. (1)IC - Arsenic - 300.0 (Riesley); Manganese - Nitrogen in Waste, Phosphorus in phosphate, Sulfate; Total Cyanide - 9999; pH (Soil) - 9045; (2)ICP/MS - 200.8 (TAL); Cadmium, Chromium, Copper, Silver; ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3)YCA - 8260A (TCL); YCA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethane, m-Xylene); (4)Semi-YCA - 8270A (Add-On) (Triethyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Barium-135) Isotopic Uranium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;			

PMG 2/14/05

4-6002-61 (Rev. 03)

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					FD4-015-125	PAGE 1 OF 2				
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE	BN	DATA TURNAROUND 45 Days / 45 Days <i>1/2</i>		
SAMPLING LOCATION 216-T-13; 10-11 ft		PROJECT DESIGNATION 200-PHW-1 Characterization Sampling and Analysis - Soil			SAF NO. F04-015			AIR QUALITY	<input type="checkbox"/>			
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle						
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A							
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P			
		NO. OF CONTAINER(S)		1	1	1	3	1	1			
		VOLUME		250mL	120mL	250mL	40mL	120mL	500mL			
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCW - 8002;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1C771	SOIL	4/28/05	0930									
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS				
<i>JSP/PL/SLW</i>		4-28-05		<i>TA FRAZIER</i>		4/28/05 14:45						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME						
LABORATORY SECTION	RECEIVED BY			TITLE			DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DISPOSED BY			DATE/TIME					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FB4-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Ceatock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 12-13 ft.	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis

(1) IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045;

(2) ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)

(3) VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, TMS-1,2-Dichloroethylene)

(4) Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)

(5) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;

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Fluor Hanford Inc		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-13B	PAGE 1 OF 2										
COLLECTOR Pope/Pfister/Tyra/Witberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE SN	DATA TURNAROUND										
SAMPLING LOCATION 216-T-13; 14-15 R		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>	45 Days / 45 DAYS <i>18</i>										
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144E510		METHOD OF SHIPMENT Government Vehicle			<i>4-26-84</i>										
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A													
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None									
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P									
			NO. OF CONTAINER(S)		1	1	1	3	1	1									
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL									
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C781		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS									
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME																
B1C775	SOIL	11-28-84	1015	X	X	X	X	X	X										
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS													
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS											
<i>Spencer</i>		<i>11-26-84 1445</i>		<i>Victor Sims</i>		<i>11/27/84 1545</i>													
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME													
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME													
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME													
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME													
LABORATORY SECTION		RECEIVED BY				TITLE				DATE/TIME									
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD				DISPOSED BY				DATE/TIME									

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Flier Hanford Inc.		CHAIR OF CUSTODY/SAMPLE ANALYSIS REQUEST		PM4-015-138	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	SN
Pope/Pfister/Tyva/Wiberg	CS Clearlock	372-9638	TRENT, SJ		
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	<input type="checkbox"/>
216-T-13; 14-15 R	200-MW-1 Characterization Sampling and Analysis - Sol		PM4-015		45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT		
		119149510	Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
<p>SPECIAL INSTRUCTIONS</p> <p>** The laboratory is to report both kerosene and diesel range compounds from the WTRH-D analysis.</p> <p>(1)IC Andens - 300.0 (Fluoride-Nitrogen-Hydrogen-Helium, Phosphorous in phosphate, Sulfate) Total Cyanide - 9000; pH (Sol) - 9045;</p> <p>(2)IC/MS - 300.8 (TAL) (Cadmium, Chromium, Copper-Silver) IC/MS - 200.9 (Add-on) (Lead, Uranium)</p> <p>(3)VOA - R260A (TCU) VOA - R260A (Add-On) (1-Bromo, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene)</p> <p>(4)Semi-VOA - R270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTRH-G; TPH-Diesel Range - WTRH-D (Total petroleum hydrocarbons - diesel range; Total petroleum hydrocarbons - kerosene range)</p> <p>(5)Gamma Spectroscopy (Caesium-137, Cobalt-60, Europium-152, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;</p> <p>PM6 2/14/05</p>					

A 6003-61403/03

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				FM-015-139	PAGE 1 OF 2
COLLECTOR	Poppe/Mister/Tyru/Wilberg	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	8N	DATA TURNAROUND
SAMPLING LOCATION	218-T-13; 19-20 ft	PROJECT DESIGNATION	200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.	FM-015	<input type="checkbox"/>	45 Days / <i>45 days</i>
ICE CHEST NO.		FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT	Government Vehicle		
SHIPPED TO	Waste Sampling & Characterization	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	N/A		
MATRIX*	A=Air D=Liquid L=Liquids DS=Drum S=Soils L=Leachate O=Oil S=Soil SP=Sludges V=Vapour W=Water M=M X=Other	POSSIBLE SAMPLE HAZARDS/REMARKS	N/A	PRESCRIPTION	Cool AC	Cool AC	None
				TYPE OF CONTAINER	3G	3G	P
				NO. OF CONTAINER(S)	1	1	1
				VOLUME	250ml	250ml	500ml
				SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
				SPECIAL HANDLING AND/OR STORAGE	Radioactive Tox B1C7B2		
SAMPLE NO.	B1C776	MATRIX*	SOIL	SAMPLE DATE	4-28-05	SAMPLE TIME	1300
CHAIN OF POSSESSION				SIGN/PRINT NAMES			
RELINQUISHED BY/REMOVED FROM	<i>Joseph</i>	DATE/TIME	4-28-05	RECEIVED BY/STORER IN	<i>V. C. B. Bils</i>	DATE/TIME	4/28/05
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORER IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORER IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORER IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORER IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORER IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORER IN		DATE/TIME	
LABORATORY SECTION	RECEIVED BY						DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD						DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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A-5009-618(03/03)

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COLLECTOR: Fibro Hanford Inc.
 COMPANY CONTACT: CS Cerlock
 PROJECT COORDINATOR: TRENT, SJ
 SAF NO. F04-015
 METHOD OF SHIPMENT: Government Vehicle

PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil
 FIELD LOGBOOK NO. COA 11914ES10
 OFFSITE PROPERTY NO. N/A
 BILL OF LADING/AIR BILL NO. N/A

SHIPPED TO: Waste Sampling & Characterization
 MATRIX*: A=Air, B=Soil, C=Water, D=Sludge, E=Other
 PRESERVATION: None

NO. OF CONTAINER(S)	TYPE OF CONTAINER	Vol	Coat						
1	250ml	120ml	1	1	1	1	1	1	1

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C783

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C777	SOIL	4-28-05	1330

CHAIN OF POSSESSION	SIGN/PRINT NAMES	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME

LABORATORY SECTION: RECEIVED BY
 FINAL SAMPLE DISPOSITION: DISPOSED BY
 TITLE: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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Filer Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE BIN
Popel/Heiter/Tyrol/Wiborg	CS Ceatback	372-9638	TRENT, SJ	DATA TURNAROUND
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY
218-T-13; 24-25 R	200-MW-1 Characterization Sampling and Analysis - S01		PM4-015	45 DAYS
ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF BRIDGMENT	
		11914RES10	Government Vehicle	
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.	
Waste Sampling & Characterization	N/A		N/A	
SPECIAL INSTRUCTIONS ** The laboratory is to report both benzene and diesel range compounds from the WPH-D analysis. (1)IC Anions - 300.0 (picogramme/milliliter) in nitrate, phosphate in phosphate, sulfate (total) (ppm) - 9999; pH (Soil) - 9045; (2)IC/MS - 200.0 (TAL) (Cadmium, Chromium, Copper, Silver) (ppm) - 200.0 (Add-on) (Lead, Uranium) (3)VOC - 8250A (TCL) YCN - 8250A (Add-On) (1-Substanc, cis-1,2-Dichloroethane, n-Butylbenzene, trans-1,2-Dichloroethylene) (4)Semi-VOC - 8270A (Add-On) (Triethyl phosphate) TPH-Gasoline Range - WPH-G; TPH-Liquid Range - WPH-L; Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - benzene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Uranium; Americium-241; Strontium-90 - Total S;				

4-6003-1 (REV. 0/03)

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Appendix 5

Data Validation Supporting Documentation

000045

GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	200-M-1		DATA PACKAGE: 50940		
VALIDATOR:	TLP	LAB:	WSCF	DATE: 6/18/05	
			SDG:	50940	
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270		SW-846 8270 (TCLP)
SAMPLES/MATRIX					
BIC769		BIC771	BIC774		BIC775
BIC774		BIC777			
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes No N/A

Comments: _____

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

GC/MS tuning/performance check acceptable? Yes No N/A

Initial calibrations acceptable? Yes No N/A

Continuing calibrations acceptable? Yes No N/A

Standards traceable? Yes No N/A

Standards expired? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) Yes No N/A
Calibration blank results acceptable? (Levels D, E) Yes No N/A
Laboratory blanks analyzed? Yes No N/A
Laboratory blank results acceptable? Yes No N/A
Field/trip blanks analyzed? (Levels C, D, E) Yes No N/A
Field/trip blank results acceptable? (Levels C, D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A
Comments: NO FB

4. ACCURACY (Levels C, D, and E)

Surrogates/system monitoring compounds analyzed? Yes No N/A
Surrogate/system monitoring compound recoveries acceptable? Yes No N/A
Surrogates traceable? (Levels D, E) Yes No N/A
Surrogates expired? (Levels D, E) Yes No N/A
MS/MSD samples analyzed? Yes No N/A
MS/MSD results acceptable? Yes No N/A
MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
MS/MSD standards? (Levels D, E) Yes No N/A
LCS/BSS samples analyzed? Yes No N/A
LCS/BSS results acceptable? Yes No N/A
Standards traceable? (Levels D, E) Yes No N/A
Standards expired? (Levels D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A
Performance audit sample(s) analyzed? Yes No N/A
Performance audit sample results acceptable? Yes No N/A
Comments: NO DAS

GC/MS ORGANIC DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

MS/MSD samples analyzed? Yes No N/A
MS/MSD RPD values acceptable? Yes No N/A
MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
MS/MSD standards expired? (Levels D, E) Yes No N/A
Field duplicate RPD values acceptable? Yes No N/A
Field split RPD values acceptable? Yes No N/A
Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: _____

6. SYSTEM PERFORMANCE (Levels D and E)

Internal standards analyzed? Yes No N/A
Internal standard areas acceptable? Yes No N/A
Internal standard retention times acceptable? Yes No N/A
Standards traceable? Yes No N/A
Standards expired? Yes No N/A
Transcription/calculation errors? Yes No N/A

Comments: _____

7. HOLDING TIMES (all levels)

Samples properly preserved? Yes No N/A
Sample holding times acceptable? Yes No N/A

Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Compound identification acceptable? (Levels D, E) Yes No N/A
 Compound quantitation acceptable? (Levels D, E) Yes No N/A
 Results reported for all requested analyses? Yes No N/A
 Results supported in the raw data? (Levels D, E) Yes No N/A
 Samples properly prepared? (Levels D, E) Yes No N/A
 Laboratory properly identified and coded all TIC? (Levels D, E) Yes No N/A
 Detection limits meet RDL? Yes No N/A
 Transcription/calculation errors? (Levels D, E) Yes No N/A
 Comments: _____

9. SAMPLE CLEANUP (Levels D and E)

GPC cleanup performed? Yes No N/A
 GPC check performed? Yes No N/A
 GPC check recoveries acceptable? Yes No N/A
 GPC calibration performed? Yes No N/A
 GPC calibration check performed? Yes No N/A
 GPC calibration check retention times acceptable? Yes No N/A
 Check/calibration materials traceable? Yes No N/A
 Check/calibration materials Expired? Yes No N/A
 Analytical batch QC given similar cleanup? Yes No N/A
 Transcription/Calculation Errors? Yes No N/A
 Comments: _____

Appendix 6

Additional Documentation Requested by Client

000050

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: VOA Ground Water Protection

SAF Number: F04-015
 Sample Date: 04/27/05
 Receive Date: 04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	1,1-Dichloroethene	75-35-4	23.340	93.400	% Recov	05/10/05	63.000	117.000	
MS	Benzene	71-43-2	25.340	101.000	% Recov	05/10/05	75.000	129.000	
MS	4-Bromofluorobenzene	460-00-4	48.770	97.500	% Recov	05/10/05	84.000	118.000	
MS	Chlorobenzene	108-90-7	24.830	98.500	% Recov	05/10/05	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	52.300	105.000	% Recov	05/10/05	82.000	136.000	
MS	Toluene-d8	2037-26-5	53.460	107.000	% Recov	05/10/05	89.000	119.000	
MS	Toluene	108-88-3	26.190	105.000	% Recov	05/10/05	76.000	120.000	
MS	Trichloroethene	79-01-6	24.920	99.700	% Recov	05/10/05	73.000	123.000	
MSD	1,1-Dichloroethene	75-35-4	21.940	87.800	% Recov	05/10/05	63.000	117.000	
MSD	Benzene	71-43-2	23.480	93.900	% Recov	05/10/05	75.000	129.000	
MSD	4-Bromofluorobenzene	460-00-4	48.240	96.500	% Recov	05/10/05	84.000	118.000	
MSD	Chlorobenzene	108-90-7	24.140	96.600	% Recov	05/10/05	79.000	119.000	
MSD	1,2-Dichloroethane-d4	17060-07-0	51.910	104.000	% Recov	05/10/05	82.000	136.000	
MSD	Toluene-d8	2037-26-5	52.830	106.000	% Recov	05/10/05	89.000	119.000	
MSD	Toluene	108-88-3	24.480	97.900	% Recov	05/10/05	76.000	120.000	
MSD	Trichloroethene	79-01-6	23.040	92.200	% Recov	05/10/05	73.000	123.000	
SPK-RPD	1,1-Dichloroethene	75-35-4	87.800	6.181	RPD	05/10/05	0.000	25.000	
SPK-RPD	Benzene	71-43-2	93.900	7.288	RPD	05/10/05	0.000	25.000	
SPK-RPD	4-Bromofluorobenzene	460-00-4	96.500	1.031	RPD	05/10/05	0.000	25.000	
SPK-RPD	Chlorobenzene	108-90-7	96.600	1.948	RPD	05/10/05	0.000	25.000	
SPK-RPD	1,2-Dichloroethane-d4	17060-07-0	104.000	0.957	RPD	05/10/05	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	106.000	0.939	RPD	05/10/05	0.000	25.000	
SPK-RPD	Toluene	108-88-3	97.900	6.999	RPD	05/10/05	0.000	25.000	
SPK-RPD	Trichloroethene	79-01-6	92.200	7.817	RPD	05/10/05	0.000	25.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: VOA Ground Water Protection

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	48.730	97.500	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	53.330	107.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.320	107.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001287									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	49.190	98.400	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	52.100	104.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.320	107.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	50.020	100.000	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	52.960	106.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.860	108.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001289									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	50.500	101.000	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	54.080	108.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.450	107.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	50.140	100.000	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	53.120	106.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.160	106.000	% Recov	05/10/05	80.000	126.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: VOA Ground Water Protection

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	49.880	99.300	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17080-07-0	52.310	105.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	54.410	109.000	% Recov	05/10/05	80.000	126.000	
BATCH QC									
BLANK	1,1-Dichloroethane	75-34-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1,1-Trichloroethane	71-55-8	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	n/a	ug/Kg	06/10/05			U
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1-Dichloroethane	75-35-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1-Butanol	71-36-3	< 40	n/a	ug/Kg	05/10/05			U
BLANK	2-Hexanone	591-78-6	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Acetone	67-64-1	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Bromodichloromethane	75-27-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Benzene	71-43-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	4-Bromofluorobenzene	460-00-4	100.20	100.000	% Recov	05/10/05	71.000	125.000	
BLANK	Bromoform	75-26-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Carbon disulfide	75-15-0	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Carbon tetrachloride	56-23-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Dibromochloromethane	124-48-1	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Chloroform	67-66-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Chlorobenzene	108-90-7	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 2.0	n/a	ug/Kg	06/10/05			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 2.0	n/a	ug/Kg	05/10/05			U

000053

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: VOA Ground Water Protection

SAF Number: F04-015
 Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Chloroethane	75-00-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloroethane-d4	17060-07-0	102.00	102.000	% Recov	05/10/05	80.000	134.000	
BLANK	trans-1,2-Dichloroethylene	166-80-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloropropane	78-87-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Ethylbenzene	100-41-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Bromomethane	74-83-9	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Chloromethane	74-87-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	2-Butanone	78-93-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Methylenechloride	75-09-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Tetrachloroethene	127-18-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Styrene	100-42-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Xylenes (total)	1330-20-7	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Toluene-d8	2037-26-5	108.20	108.000	% Recov	05/10/05	80.000	126.000	
BLANK	Toluene	108-88-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	trans-1,3-Dichloropropene	10061-02-8	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Trichloroethene	79-01-6	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Vinyl chloride	75-01-4	< 2.0	n/a	ug/Kg	05/10/05			U
LCS	1,1-Dichloroethene	75-35-4	23.520	94.100	% Recov	05/11/05	70.000	130.000	
LCS	Benzene	71-43-2	27.060	108.000	% Recov	05/11/05	70.000	130.000	
LCS	4-Bromofluorobenzene	460-00-4	51.260	103.000	% Recov	05/11/05	71.000	125.000	
LCS	Chlorobenzene	108-90-7	28.280	105.000	% Recov	05/11/05	70.000	130.000	
LCS	1,2-Dichloroethane-d4	17060-07-0	53.270	107.000	% Recov	05/11/05	80.000	134.000	
LCS	Toluene-d8	2037-26-5	54.640	109.000	% Recov	05/11/05	80.000	126.000	
LCS	Toluene	108-88-3	25.940	104.000	% Recov	05/11/05	70.000	130.000	
LCS	Trichloroethene	79-01-6	27.160	109.000	% Recov	05/11/05	70.000	130.000	

000054

Date: 20 June 2005
 To: Fluor Hanford Inc. (technical representative)
 From: TechLaw, Inc.
 Project: 200-MW-1 Characterization Sampling and Analysis - Soil
 Subject: Wet Chemistry - Data Package No. WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C771	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C774	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C775	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C776	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C777	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*

* - Phosphate not validated or reported per FHI.

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested by Client

DATA QUALITY PARAMETERS

• **Holding Times/Sample Preservation**

Analytical holding times are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be analyzed within 28 days for sulfate and immediate

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(24 hours) for pH.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

Due to the holding time being exceeded by greater than twice the limit, all pH results were qualified as estimates and flagged "J".

All other holding times were acceptable.

- **Method Blanks**

Method Blanks

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. All blank results must fall below the contract required detection limit (CRQL) to be acceptable.

All method blank results were acceptable.

Field (Equipment) Blank

No equipment blanks were submitted for analysis.

- **Accuracy**

Matrix Spike

Matrix spike (MS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike and LCS recoveries must fall within the range of 75% to 125%. Samples with a recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a recovery of 30% to 74% and a sample result less than the IDL are qualified "UJ". Samples with a recovery of greater than 125% or less than 75% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 125% and a sample result less than the IDL, no qualification is required.

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All matrix spike recovery results were acceptable.

Laboratory Control Sample

The LCS is used to monitor the overall performance of all steps in the analysis. Recoveries must fall within the range of 80% to 120% for LCS analysis. Samples with a recovery of less than 50% are rejected and flagged "UR". Samples with a recovery of 50% to 79% and a sample recovery below the IDL are qualified "UJ". Samples with a recovery of greater than 120% or less than 80% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 120% and a sample result less than the IDL, no qualification is required.

All LCS results were acceptable.

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than 35%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All other laboratory duplicate results were acceptable.

Field Duplicate

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All results met the RTQL.

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- **Completeness**

Data package No. 50940 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Due to the holding time being exceeded by greater than twice the limit, all pH results were qualified as estimates and flagged "J". Data flagged "J" is an estimate, but under the FHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

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Qualifiers which may be applied by data validators in compliance with FHI validation SOW are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.
- BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.
- NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).
- N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

000006

Appendix 2

Summary of Data Qualification

000007

WET CHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
pH	J	All	Holding time

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000009

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case		SDG: WSCF20050940											
Sample Number	B1C769		B1C771		B1C774		B1C775		B1C776		B1C777		
Remarks													
Sample Date	4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		
General Chemistry	RTQI	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Sulfate	5	12.0		<4.90	U	16.7		18.5		7.32		25.0	
pH**		9.52	J	9.57	J	9.58	J	9.70	J	9.69	J	9.44	J

** - Units are pH units

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Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015; F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic													
W050001286	B1C769	GRP TRENT	TS	Total solids	SOIL	LA-519-412	91.2	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	PH	pH Measurement	SOIL	LA-212-411	9.52	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	12.0	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	7440-49-9	Cadmium	SOIL	LA-505-412	0.159	mg/kg	0.92	0.092	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	7.26	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	10.9	mg/kg	0.93	0.18	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP TRENT	7440-01-1	Uranium	SOIL	LA-505-412	0.901	mg/kg	0.93	0.092	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	TS	Total solids	SOIL	LA-519-412	90.7	%	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	PH	pH Measurement	SOIL	LA-212-411	9.57	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	2.65	mg/kg	49.00	2.6	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	4.90	mg/kg	49.00	4.9	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	7440-49-9	Cadmium	SOIL	LA-505-412	0.245	mg/kg	0.95	0.095	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.07	mg/kg	0.95	3.8	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	0.18	mg/kg	0.95	0.19	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP TRENT	7440-01-1	Uranium	SOIL	LA-505-412	1.03	mg/kg	0.95	0.095	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	TS	Total solids	SOIL	LA-519-412	94.4	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	PH	pH Measurement	SOIL	LA-212-411	9.58	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	16.7	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	7440-49-9	Cadmium	SOIL	LA-505-412	0.306	mg/kg	0.91	0.091	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.92	mg/kg	0.91	3.6	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	13.4	mg/kg	0.91	0.18	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP TRENT	7440-01-1	Uranium	SOIL	LA-505-412	1.01	mg/kg	0.91	0.091	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	TS	Total solids	SOIL	LA-519-412	96.2	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001289	B1C775	GRP TRENT	PH	pH Measurement	SOIL	LA-212-411	9.70	pH	1.00	0.010	05/03/05	04/28/05	04/28/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 1.1

Groundwater Remediation Program

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JL 6/20/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.85	mg/kg	49.00	2.8	05/10/05	04/28/05	04/28/05
W050001289	B1C775	14808-79-8	Sulfate	SOIL	LA-533-410	B	18.5	mg/kg	49.00	4.9	05/10/05	04/28/05	04/28/05
W050001289	B1C775	7440-43-0	Cadmium	SOIL	LA-505-412		0.167	mg/kg	0.93	0.003	05/10/05	04/28/05	04/28/05
W050001289	B1C775	7440-47-3	Chromium	SOIL	LA-505-412		6.45	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001289	B1C775	7439-92-1	Lead	SOIL	LA-505-412		7.45	mg/kg	0.93	0.19	05/10/05	04/28/05	04/28/05
W050001289	B1C775	7440-81-1	Uranium	SOIL	LA-505-412		0.028	mg/kg	0.93	0.055	05/10/05	04/28/05	04/28/05
W050001290	B1C776	TS	Total solids	SOIL	LA-519-412		97.0	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001290	B1C776	PH	pH Measurement	SOIL	LA-212-411	J	9.89	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001290	B1C776	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001290	B1C776	14808-79-8	Sulfate	SOIL	LA-533-410	B	7.32	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001290	B1C776	7440-43-0	Cadmium	SOIL	LA-505-412		0.141	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001290	B1C776	7440-47-3	Chromium	SOIL	LA-505-412		4.22	mg/kg	0.89	3.6	05/10/05	04/28/05	04/28/05
W050001290	B1C776	7439-92-1	Lead	SOIL	LA-505-412		6.02	mg/kg	0.89	0.18	06/10/05	04/28/05	04/28/05
W050001290	B1C776	7440-61-1	Uranium	SOIL	LA-505-412		0.544	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001291	B1C777	TS	Total solids	SOIL	LA-519-412		98.9	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001291	B1C777	PH	pH Measurement	SOIL	LA-212-411	J	8.44	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001291	B1C777	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001291	B1C777	14808-79-8	Sulfate	SOIL	LA-533-410	B	25.0	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	7440-43-0	Cadmium	SOIL	LA-505-412	U	< 0.0983	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001291	B1C777	7440-47-3	Chromium	SOIL	LA-505-412	U	< 3.97	mg/kg	0.99	4.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	7439-92-1	Lead	SOIL	LA-505-412		3.11	mg/kg	0.99	0.20	05/10/05	04/28/05	04/28/05
W050001291	B1C777	7440-61-1	Uranium	SOIL	LA-505-412		0.459	mg/kg	0.99	0.089	05/10/05	04/28/05	04/28/05

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MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria

DF=Dilution Factor

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Sample Delivery Group	WSCF20050940
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F04-015
Data Deliverable	Summary Report

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.
- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.
- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Uranium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Activity (pCi/g)	Count
<u>Uranium-234/ Uranium-235</u>				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
<u>Plutonium-238</u>				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
Sample Number	Sample ID	Isotope	Results	Units
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americium-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Sub-Sample	Tracer	Recovery (%)
<u>Americium-243</u>			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
<u>Plutonium-242</u>			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
Sample ID	W050001286	Isotope	Percent Recovery (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
<u>Strontium-85</u>			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
<u>Uranium-232</u>			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	Tracer	Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Pauline D. Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

Hg - mercury
 IC - ion chromatography
 ICP - inductively coupled plasma
 ICP/AES - ICP/atomic emission spectroscopy
 ICP/MS - ICP/mass spectrometry
 Total U - total uranium
 AT/TB - total alpha/total beta
 AEA - Alpha Energy Analysis
 WTPH-G - Total Hydrocarbons-Gasoline

Am - americium
 Cm - curium
 Pu - plutonium
 Np - neptunium
 GEA - gamma energy analysis
 H3 - Tritium
 Sr - Strontium 89, 90
 WTPH-D - Total Hydrocarbons-Diesel
 TSS - Total Suspended Solids

5/30/05

Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					F04-015-124	PAGE 1 OF 2			
COLLECTOR Pope/Pfister/Tyre/Wiberg		COMPANY CONTACT CS Cearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ					
SAMPLING LOCATION 216-T-13; 10-11 ft		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil			SAF NO. F04-015		PRICE CODE SN DATA TURNAROUND 45 Days / 45 Days				
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle					
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A						
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P	
			NO. OF CONTAINER(S)		1	1	1	3	1	1	
			VOLUME		250ml	120ml	250ml	40ml	120ml	900ml	
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770 20050940		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCR - R082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1C769	1A052001286 SOIL	9/28/05	0930								
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS			
TSB/AL/4/8/05		4-28-05 14:45		TA PRAZNER		4-28-05 14:45					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME					

4-26-05

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Fleur Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						FM-015-125	PAGE 1 OF 2		
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Gearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE	BN	DATA TURNAROUND	
SAMPLING LOCATION 216-T-13; 10-11 R		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil				SAP NO. FM-015		AIR QUALITY	<input type="checkbox"/>	45 Days / 45 Days <i>12m</i>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle					
SHIPPED TO Waste Sampling & Characterization		OPPOSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A					
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P	
			NO. OF CONTAINER(S)		1	1	1	1	1	1	
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL	
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCB - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1C771	SOIL	4/28/05	0930								
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS				
<i>JS/PJ/ASW</i>		4-28-05	<i>TA FRAZIER</i>		4/28/05 14:45						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME						
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME						
LABORATORY SECTION	RECEIVED BY				TITLE				DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD				DISPOSED BY				DATE/TIME		

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Fluor Hanford Inc.		CHAIR OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA
Pope/Phaser/Tyra/Wiberg	CS Central	372-9638	TRENT, SJ	8N	TURNAROUND
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	45 Days
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Sol		F04-015	<input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT		
	119144ES10		Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis (1)C Anions - 300.0 (Fluoride, Nitrate, Nitrite, Phosphate, Sulfate) Total Crude - 900; pH (Sci) - 9045; (2)IC/MS - 200.8 (AL) (Cadmium, Chromium, Copper, Silver) (CP/MS - 200.8 (Add-on) (Lead, Uranium) (3)MOA - 8260A (TCL; VOA - 8260A (Add-On) (1-Buanol, ds-L,2-Dichloroethane, n-Butylbenzene, Toluene, Xylene) (4)Semi-VOA - 8270A (Add-On) (Triethyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;					

PMG 2/14/05

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A-6003-618(03/05)

COLLECTOR Fluor Hanford Inc. Pope/Plister/Tyra/Wiberg		COMPANY CONTACT CS Carlock 372-9638		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N AIR QUALITY <input type="checkbox"/>		PAGE 1 OF 1 DATA TURNAROUND 45 DAYS / 45 DAYS	
SAMPLING LOCATION 216-T-13; 12-13 R		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAP NO. FO4-015		METHOD OF SHIPMENT Government Vehicle		FIELD LOGBOOK NO. COA 119146ES10		BELL OF LADING/AIR BILL NO. N/A	
ICE CHEST NO.		OFFSITE PROPERTY NO. N/A		PRESEVATION		TYPE OF CONTAINER		NO. OF CONTAINERS(S)		VOLUME	
SPECIAL HANDLING AND/OR STORAGE Radioactive Tr Tr; B1C780		SAMPLE ANALYSIS		SAMPLE DATE 4-24-05		SAMPLE TIME 0855		SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS		DATE/TIME	
SHIPPED TO Waste Sampling & Characterization		POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		RECEIVED BY/STORER IN Victoria B... 4-28-05		DATE/TIME 1445		RECEIVED BY/STORER IN		DATE/TIME	
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Soil O=Oil S=Soil SC=Sediment T=Trash V=Vegetation W=Water WI=Wipe X=Other		SAMPLE NO. B1C774		MATRIX* SOIL		RECEIVED BY/STORER IN		DATE/TIME		RECEIVED BY/STORER IN	
LABORATORY SECTION		RECEIVED BY		TITLE		DISPOSAL METHOD		DISPOSED BY		DATE/TIME	

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A-6003-618(03/03)

Finer Hartford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 2	OF 2
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA
Pope/Pfister/Tyra/Wiberg	CS Corbett	372-9638	TRENT, SJ	BM	TURNAROUND
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	45 Days
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Soil		FO4-015	<input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT		
		119144ES10	Government Vehicle		
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		
SPECIAL INSTRUCTIONS ** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. (1)IC Anions - 300.0 (Fluoride, Nitrate, Nitrite, Thiocyanate, Phosphate, Sulfate) (Test Cycle: 9046; pH (S4)) - 9045; (2)ICP/MS - 200.8 (Al, Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3)VDA - 8260A (TC); YOA - 6260A (Add-On) (4-Bucanol, cis-1,2-Dichloroethane, n-Butylacetone, XEHS-2, Dichloroethylene) (4)Semi-VDA - 8270A (Add-On) (Triethyl phosphate, TPH-Casoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Caesium-137, Cobalt-60, Europium-152, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-90 - Total S7					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					F04-015-138		PAGE 1 OF 2											
COLLECTOR Pope/Pfister/Tyra/Wiberg		COMPANY CONTACT CS Clearlock		TELEPHONE NO. 372-9638		PROJECT COORDINATOR TRENT, SJ		PRICE CODE SN		DATA TURNAROUND										
SAMPLING LOCATION 216-T-13; 14-15 R.		PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil			SAF NO. F04-015		AIR QUALITY <input type="checkbox"/>		45 Days / 45 DAYS <i>8</i>											
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119144ES10		METHOD OF SHIPMENT Government Vehicle														
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A															
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tube V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None										
			TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P										
			NO. OF CONTAINER(S)		1	1	1	3	1	1										
			VOLUME		250mL	120mL	250mL	40mL	120mL	500mL										
		SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C781		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCNs - 6002	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS									
SAMPLE NO.		MATRIX*		SAMPLE DATE		SAMPLE TIME														
B1C775		SOIL		4-28-85		0615		X	X	X	X	X	X							
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS												
<i>Spoty/Aspen</i>		4-26-85 1445		<i>Vincent B. Sims</i>		4/27/85 1445														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
LABORATORY SECTION		RECEIVED BY		TITLE		DATE/TIME														
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY		DATE/TIME														

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FD4-015-128	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Clearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE SN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 14-15 R	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. *PM6 2/14/05*

(1)IC Anions - 300.D (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate); Total Cyanide - 9010; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, Copper, Silver) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene)
(4)Semi-VOA - 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;

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COLLECTOR Fluor Hanford Inc. Pope/Peter/Tyrol/Wiberg		COMPANY CONTACT CS Clearlock 372-9638		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST PROJECT COORDINATOR TRENT, SI SAF NO. F04-015 METHOD OF SHIPMENT Government Vehicle		F04-015-139	PAGE 1 OF 2
SAMPLING LOCATION 216-T-13; 19-20 ft		PROJECT DESIGNATION 200-MRF-1 Characterization Sampling and Analysis - Soil		PRICE CODE 8N <input type="checkbox"/>		DATA TURNAROUND 45 Days / <i>45 Days / 4.4.04</i>	
ICE CHEST NO.		FIELD LOGBOOK NO. COA 11914ES10		AIR QUALITY <input type="checkbox"/>			
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A-Air DL-Drum L-Liquids DS-Drum S-Solids L-Liquid O-Oil S-Soil SE-Sediment T-Tissue V-Vegetation W-Water W-Wire X-Other		PRESERVATION None		COOLING Cool 4C			
POSSIBLE SAMPLE HAZARDS/ REMARKS N/A		TYPE OF CONTAINER 3G		NO. OF CONTAINER(S) 1			
SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: BIC782		VOLUME 250ml		NO. OF CONTAINER(S) 1			
SAMPLE ANALYSIS Radioactive Tie To: BIC782		SAMPLE DATE 4-28-05		SAMPLE TIME 1300			
SAMPLE NO. BIC776		MATRIX* SOIL		SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM <i>JSP of 4/28/05</i>		RECEIVED BY/STORED IN <i>V. L. ...</i>		RECEIVED BY/STORED IN <i>4/28/05</i>		DATE/TIME <i>1945</i>	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		RECEIVED BY/STORED IN		DATE/TIME	
LABORATORY SECTION		TITLE		RECEIVED BY		DATE/TIME	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		RECEIVED BY		DATE/TIME	

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FORM-015-13B	PAGE 2 OF 2
COLLECTOR Pope/Plister/Tyner/Wiberg	COMPANY CONTACT CS Clearback	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TREAT, SJ	PRICE CODE BN	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MH-1 Characterization Sampling and Analysis - Soil		SAF NO. FM-015	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO. COA 11914HE510		METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
SPECIAL INSTRUCTIONS ** The laboratory is to report both hexane and diesel range compounds from the WPH-D analysis. (1)IC Anions - 300.0 (Phenol, Nitrogen, Nitrate, Nitrite, Phosphate, Sulfate) (Total Cyanide - 9000; pH (Soil) - 9045; (2)IC/MS - 200.8 (TA) (Cadmium, Chromium, Copper, Silver, ICP/MS - 200.8 (Add-on) (Lead, Uranium) (3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, di-1,2-Dichloroethylene, m-xylene, trans-1,2-Dichloroethylene) (4)Semi-VOA - 8270A (Add-On) (Through phosphate) TPH-Gasoline Range - WPH-G; TPH-Diesel Range - WPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) (5)Gamma Spectroscopy (Cesium-137, Cobalt-60), Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 - Total Sr;					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F04-015-140	PAGE 1	OF 2										
COLLECTOR Pope/Pfister/Tyra/Wiberg SAMPLING LOCATION 216-T-13; 24-25 ft ICE CHEST NO.		COMPANY CONTACT CS Clearlock PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil FIELD LOGBOOK NO.		TELEPHONE NO. 372-9638 COA 119144ES10		PROJECT COORDINATOR TRENT, SJ SAF NO. F04-015 METHOD OF SHIPMENT Government Vehicle		PRICE CODE SN AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 45 Days / 45 Days											
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A																
MATRIX* A=Air DL=Drum L=Liquid DS=Drum Solid L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water W=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS N/A	PRESERVATION		Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None											
		TYPE OF CONTAINER		gG	gG	gG	gG*	gG	P											
		NO. OF CONTAINER(S)		1	1	1	3	1	1											
	VOLUME		250mL	120mL	250mL	40mL	120mL	50mL												
SPECIAL HANDLING AND/OR STORAGE Radioactive To: 81C/83		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCNB - 8042	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS											
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME																	
B1C777	SOIL	4-28-05	1330																	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS												
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME														
LABORATORY SECTION	RECEIVED BY			TITLE			DATE/TIME													
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DISPOSED BY			DATE/TIME													

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Piler Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FORM 015-140	PAGE 1 OF 2
COLLECTOR	CS Contact	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNOVER
Pope/Phelan/Tyng/Wiberg	372-9638	TRENT, SI	SAF NO.	AIR QUALITY	45 Days
SAMPLING LOCATION	PROJECT DESIGNATION	FIELD LOGBOOK NO.	METHOD OF SHIPMENT		
216-T-13; 24-25 R	200-MW-1 Characterization Sampling and Analysis - Soil	COA	Government Vehicle		
ICE CHEST NO.	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
	N/A		N/A		
<p>SPECIAL INSTRUCTIONS</p> <p>** The laboratory is to report both benzene and diesel range compounds from the WPH-D analysis.</p> <p>(1)IC Arions - 300.8 (Nitrogen), Nitrogen in Hexane, Phosphorus in phosphate, Sulfate Total Cyanide - 9990; pH (Soil) - 9045;</p> <p>(2)IC/MS - 200.8 (Van), Chromium, Chromium, Silver, Silver IC/MS - 200.8 (Add-on) (Lead, Uranium)</p> <p>(3)VOC - 8260A (TC), VOA - 8260A (Add-On) (1-Band, de-1,2-Dichloroethane, n-Butylbenzene, m-Xylene, toluene)</p> <p>(4)Semi-VOC - 8270A (Add-On) (Triethyl phosphate) TPH-Gasoline Range - WPH-G; TPH-Diesel Range - WPH-D (Total petroleum hydrocarbons - diesel range; Total petroleum hydrocarbons - benzene range)</p> <p>(5)Gamma Spectroscopy (Caesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotope Potassium, Isotope Uranium, Americium-241; Strontium-89,90 - Total Sr;</p>					

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Appendix 5

Data Validation Supporting Documentation

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GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	200-mw-1		DATA PACKAGE: 50940		
VALIDATOR:	TLI	LAB:	WSEF	DATE: 6/18/05	
			SDG:	50940	
ANALYSES PERFORMED					
Anions/IC	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI	pH	NO ₃ /NO ₂
Sulfate	TDS	TKN	Phosphate		
SAMPLES/MATRIX					
BIC769 BIC771 BIC774 BIC775					
BIC776 BIC777					
Soil					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes No N/A

Comments: _____

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? Yes No N/A

Initial calibrations acceptable? Yes No N/A

ICV and CCV checks performed on all instruments? Yes No N/A

ICV and CCV checks acceptable? Yes No N/A

Standards traceable? Yes No N/A

Standards expired? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments: _____

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E)..... Yes No N/A
ICB and CCB results acceptable? (Levels D, E) Yes No N/A
Laboratory blanks analyzed? Yes No N/A
Laboratory blank results acceptable?..... Yes No N/A
Field blanks analyzed? (Levels C, D, E) Yes No N/A
Field blank results acceptable? (Levels C, D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A
Comments: NO FB

4. ACCURACY (Levels C, D, and E)

Spike samples analyzed? Yes No N/A
Spike recoveries acceptable? Yes No N/A
Spike standards NIST traceable? (Levels D, E)..... Yes No N/A
Spike standards expired? (Levels D, E)..... Yes No N/A
LCS/BSS samples analyzed? Yes No N/A
LCS/BSS results acceptable?..... Yes No N/A
Standards traceable? (Levels D, E)..... Yes No N/A
Standards expired? (Levels D, E) Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A
Performance audit sample(s) analyzed? Yes No N/A
Performance audit sample results acceptable?..... Yes No N/A
Comments: NO FAS

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

- Duplicate RPD values acceptable? Yes No N/A
- Duplicate results acceptable? Yes No N/A
- MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
- MS/MSD standards expired? (Levels D, E) Yes No N/A
- Field duplicate RPD values acceptable? Yes No N/A
- Field split RPD values acceptable? Yes No N/A
- Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: subset - RPD 25.67% J all 1/20/14

6. HOLDING TIMES (all levels)

- Samples properly preserved? Yes No N/A
- Sample holding times acceptable? Yes No N/A

Comments: pk > 2x J all

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? Yes No N/A
Results supported in the raw data? (Levels D, E)..... Yes No N/A
Samples properly prepared? (Levels D, E)..... Yes No N/A
Detection limits meet RDL? Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: _____

Appendix 6

Additional Documentation Requested by Client

000038

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
 Matrix: SOLID
 Test: Anions by Ion Chromatography

SAF Number: F04-015
 Sample Date: 04/28/05
 Receive Date: 04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Phosphate (P) by IC	PO4-P	<2.65e0	n/a	RPD	05/10/05	0.000	20.000	U
DUP	Sulfate	14808-79-8	9.27e+00	25.670	RPD	05/10/05	0.000	20.000	
MS	Phosphate (P) by IC	PO4-P	8.21e-01	84.727	% Recov	05/10/05	75.000	125.000	
MS	Sulfate	14808-79-8	1.87e+00	93.500	% Recov	05/10/05	75.000	125.000	
MSD	Phosphate (P) by IC	PO4-P	9.13e-01	94.221	% Recov	05/10/05	75.000	125.000	
MSD	Sulfate	14808-79-8	1.86e+00	93.000	% Recov	05/10/05	75.000	125.000	
BATCH QC									
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	05/10/05	0.000	300.000	U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	05/10/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	05/10/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	05/10/05	0.000	300.000	U
LCS	Phosphate (P) by IC	PO4-P	1.90e+02	98.039	% Recov	05/10/05	80.000	120.000	
LCS	Sulfate	14808-79-8	3.93e+02	98.498	% Recov	05/10/05	80.000	120.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: pH Soil and Waste Measurement

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date: 04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268 BATCH QC ASSOCIATED WITH SAMPLE									
DUP	pH Soil and Waste Measurement	PH	9.805	0.398	RPD	05/03/05	0.000	3.000	

000040